YEARBOOK-FORECAST NUMBER

INDEX PAGE 65

The OIL WEEKLY

FOR THE DRILLING, PRODUCING, PIPE LINE INDUSTRY

PROBLEM

PERFECT A ROCK BIT WHICH WILL MAKE MAXIMUM FOOTAGE IN FORMATIONS ON THE HARDER SIDE OF MEDIUM

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SELECT CEMENT TO FIT THE JOB

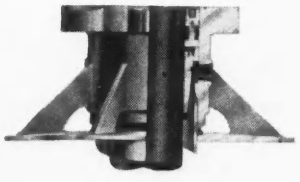
For maximum compactness...

SHAFFER COMBINATION LANDING BASE HEADS

Where cellar space is at a premium, the Shaffer Combination Landing Base Head is ideal. It provides in *one* unit a Base and Head having a total vertical height equal to or less than the height of a conventional head *alone*. The Shaffer Base Head is attached to the surface casing in the same manner as a regular landing base—usually welded, but can be furnished with screw connections if preferred. The top portion of the Head is so designed that the next string of casing can be landed and packed-off in this portion of the Base Head in the same manner as in a separate Landing Head.

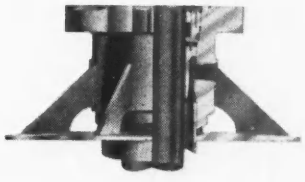
FIVE TYPES

Shaffer Combination Landing Base Heads are available in *five* types to meet various requirements. In addition to the four types shown below, a Shaffer Model E Combination Landing Base Head is also available in which the packing unit and snap ring construction are essentially the same as the Model E Full Opening Packing unit shown on the previous page.



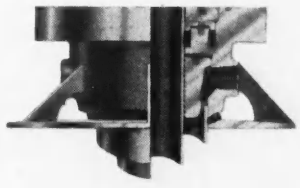
MODEL A

Has two separate rubber packing rings packed off simultaneously by tightening a single threaded ring nut. Slips seat in a split spider supported on a shoulder in the bore of the Base Head.



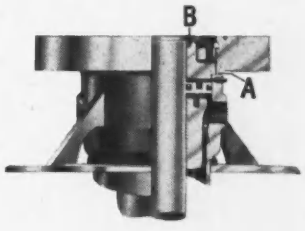
MODEL B

Has a rubber packing ring around the casing and a composition packing ring seating against a tapered shoulder in the bore of the Base Head, each packed off separately by threaded ring nuts. Slips seat directly in tapered bore of body.



MODEL C

Is similar in design to Model A except vertical dimensions of the various parts have been reduced to provide even greater compactness. Slip area, though reduced, is ample to carry the casing weight.



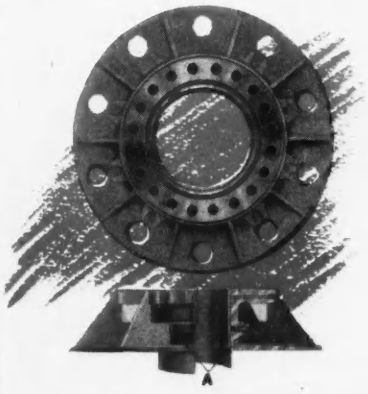
MODEL D

Has an all-metal packing unit and no internal threads are used for holding the packing unit in place. It does not depend upon the head above to effect its seal. Internal bore of the Base Head is sealed by copper ring (A)...casing by full-circumferential weld (B). Snap ring in groove holds packing unit in place.

SHAFFER LANDING BASES

Shaffer Landing Bases—thoroughly proven and dependable for all requirements—are available in *two* basic types...the Shaffer Regular Landing Base and the Shaffer Split Landing Base.

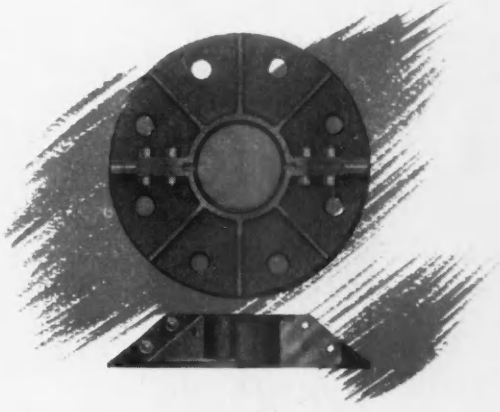
The Shaffer Regular Landing Base is available in both flange and flangeless types. The flange type is usually welded to the surface casing but can be furnished with screw connections if preferred. With this Base, the Landing Head is flanged and bolted to the Base. The upper flange of the Base carries slots for the tie-down rods and is regularly furnished to meet API ring joint specifications, but can be supplied on order, to fit any head. With the flangeless type, the surface string is first welded to the Base, after which the Landing Head is welded to both the Base and the casing string. Slots for the tie-down rods are located on the perimeter of the Landing Head flange.



Shaffer Regular Landing Base—Flange Type with secondary welding slots and test weld features

UNIQUE TEST-WELD FEATURE

Shaffer Regular Landing Bases are furnished with Secondary Welding Slots (A) and can be furnished with Test Weld Features in which a molded packing ring is inserted into the groove cut in the bore. Prior to test, plastic packing is injected behind this ring, effecting a seal around the pipe. A pump is then connected to a threaded opening between the weld and packing ring and hydraulic pressure can be applied to test the weld.



SHAFFER SPLIT LANDING BASES

Can be placed without "letting go" of the surface string and also provide important advantages where space is limited, since the two halves can be brought in separately, clamped around the casing in very close quarters, then welded to form a pressure-tight seal.

The above are just a few highlights of the many advanced Shaffer units available for simplifying and speeding modern casing suspension programs. The Shaffer line of completion equipment includes not only the Bases and Heads outlined above, but also a complete line of Tubing Heads, Production Hook-ups and Christmas Trees, a wide choice of Adjustable Flow Beans for production control and many other items. See pages 3454 to 3506 of your 1947 Composite Catalog for further details.

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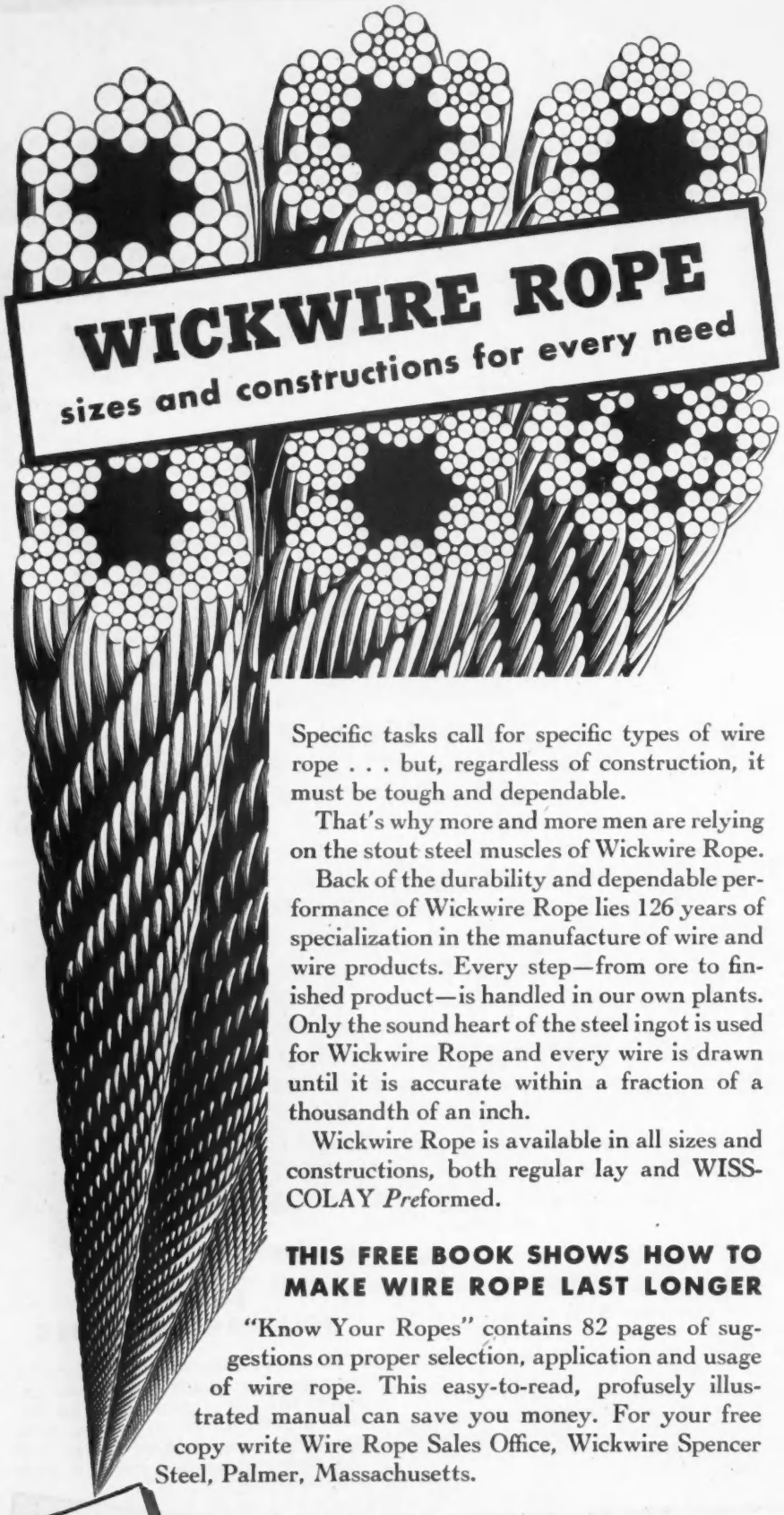

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CF&I

Looking Ahead

WITH THE EDITOR

UNEQUAL distribution of cement about the casing in oil wells has resulted in costly workovers in later production life, particularly so if it is a high-pressure well. Both the operators and cementing companies have made endless attempts to correct this situation, which results from crooked holes, tight sections, heaving shales, etc. Devices have been patented and manufactured to insure centering the casing within the well bore in order that the cement may surround the production string.

While satisfaction has been attained in many instances, a more equal distribution of the cement about the casing is still to be desired. The past year has witnessed the advent of advanced methods of better cementing jobs. Probably the most outstanding development is that of rotating the casing during the cementing operation to allow the cement to completely surround the casing and form an effective seal between it and the wall of the hole. Experience has proven that even crooked holes can be successfully cemented by rotating the casing.

Results of more than a year's experience in this practice will be presented in next week's issue of THE OIL WEEKLY. Roy E. Edwards, engineer for Halliburton Oil Well Cementing Company will discuss "Rotation of Casing During Cementing" in an article containing data on latest results and present practices in this operation. Much experimentation has been performed to obtain helpful information. Illustrations of equipment, both experimental and that actually used in cementing work will be presented. What has been done and what it means to the oil operator are of great importance in eliminating future workovers and production difficulties.

THE OIL WEEKLY, published every Monday. Entered as second class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879.

Specialized Oil Publications of
THE GULF PUBLISHING COMPANY
Box 2608, Houston (1), Texas

The OIL WEEKLY and The COMPOSITE CATALOG
for the drilling-producing-pipe line industry

PETROLEUM REFINER and The REFINERY CATALOG
for the refining-natural gasoline industry

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Published every Monday. Single copies 25 cents (except special issues). Subscription price: domestic and foreign, $2 a year; 2 years, $3; 3 years, $4. Advertising rates on application.
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The OIL WEEKLY

ENGINEERING NEWS STATISTICS

R. L. DUDLEY, President, Publisher A. L. BURNS, General Manager

Contents

FEBRUARY 10, 1947

VOLUME 124, No. 11

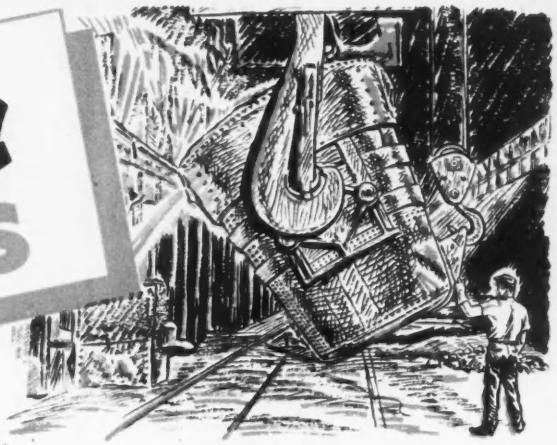
Technical and Feature Articles

INDEX TO STATISTICAL TABLES AND CHARTS 67
THE CHANGING PANORAMA 69
SALIENT ANNUAL STATISTICS 72
DEMAND GROWTH CONFRONTS UNITED STATES WITH NEED FOR INCREASED OIL SUPPLIES 74
By L. J. Logan
WORLD CRUDE PRODUCTION SHOWING VERY SHARP RISE 78
By Weldon B. Hill
CESSATION OF WARFARE FAILS TO HALT UPWARD TREND IN UNITED STATES CRUDE OIL PRODUCTION 84
STOCKS HIGHER AS YEAR BEGINS 90
FEW FIELDS PRODUCE BIG DAILY VOLUMES 92
FIFTY-SEVEN FIELDS HAVE HAD BIG YIELD 94
U. S. IMPORTS HIGHEST SINCE 1922 96
U. S. NATURAL GASOLINE PRODUCTION AT NEW HIGH 98
PEAK NATURAL GAS OUTPUT IS FORERUNNER OF FURTHER GAIN 100
REFINERY OPERATIONS DUE TO BREAK PEAK REACHED IN 1946 104
UNITED STATES PRODUCING OIL WELLS AT PEAK LEVEL 106
MORE WELLS TO REQUIRE LIFTING EQUIPMENT 110
MORE DRILLING FORECAST FOR 1947 112
1946 COMPLETIONS SOAR TO PREWAR LEVEL 114
SHARP INCREASE SENDS FOOTAGE DRILLED TO NEAR-RECORD LEVEL 118
DRILLING AND PRODUCING DEPTH MARKS BROKEN 122
SMALLER FIRMS DRILLED THREE-FOURTHS OF WELLS 126
FEWER RIGS RUNNING THAN A YEAR AGO 129
WILDCAT DRILLING AT NEW PEAK 130
WILDCATTING SUCCESS BELOW AVERAGE RATIO 136
U. S. CRUDE RESERVES REACH ALL-TIME PEAK 139
PIPE LINE BUILDING GAINS 144
By James S. Critz
PRODUCING WELLS AND PRODUCTION IN U. S. OIL FIELDS 154
SALIENT DATA ON PRODUCTIVE EXPLORATORY WELLS COMPLETED IN U. S. IN 1946 200
GEOPHYSICAL AND CORE DRILLING ACTIVITY DURING 1946 240
DRILLING HINTS 242

News and Departments

LOOKING AHEAD 4
THE OUTLOOK 249
THE WEEK'S NEWS 251
CRUDE PRODUCTION 256
PIPE LINE NEWS 260
INTERNATIONAL NEWS 262
NEW EQUIPMENT, LITERATURE 265
MARKET TRENDS 269
FIELD OPERATIONS 271
EXPLORATORY COMPLETIONS 287
SQUEAKS FROM THE BULL WHEEL 290
MEN IN THE INDUSTRY NEWS 291
MANUFACTURERS' NOTES 294
ADVERTISERS' INDEX 296

Youngstown to NORTH TEXAS

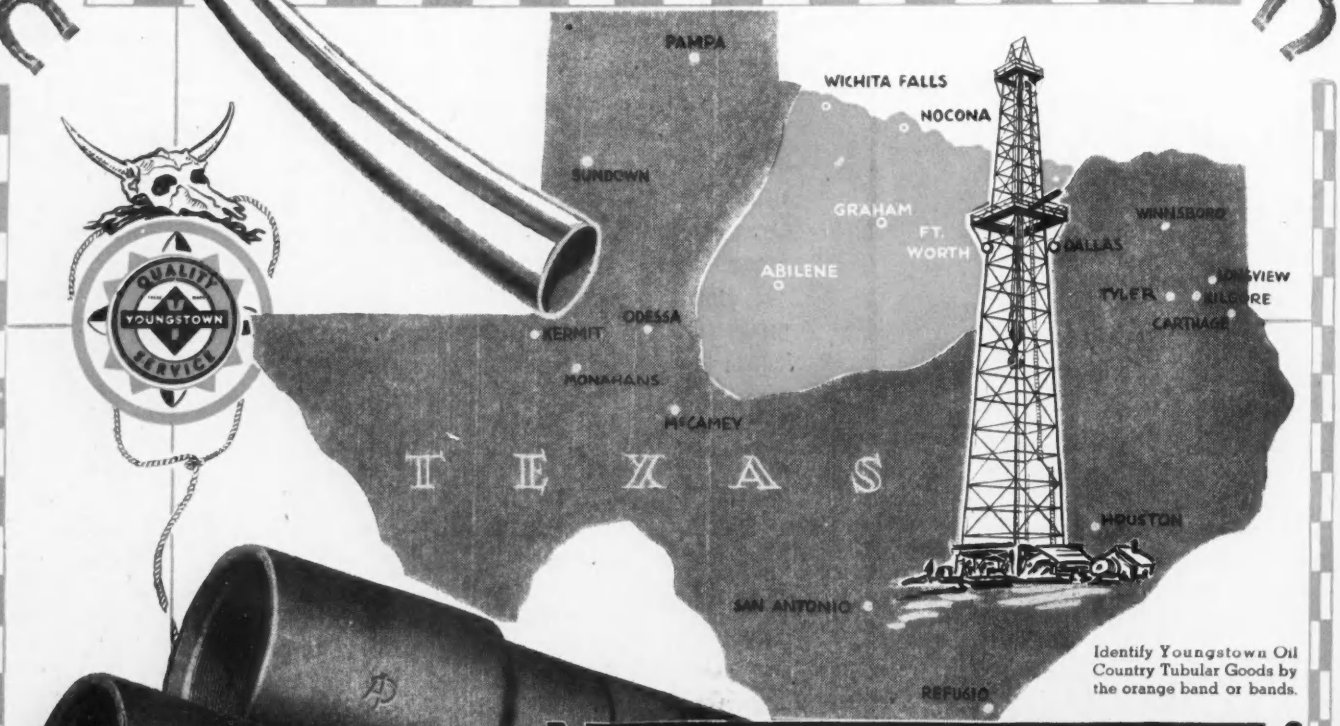


FOR over 40 years North Texas has paid rich oil rewards for effort. Its pools have been small and scattered, but many and productive. Output of crude has climbed steadily through the years. New discoveries and extensions keep adding to its proven reserves.

In North Texas, wildcat success runs well above the state and national average, thereby stimulating both shallow and deep well drilling in recent years. Last year saw more completions here than in any other part of the state.

Since the first wide spread discoveries of oil back in 1902, North Texas has used many millions of feet of Youngstown drill pipe, casing, tubing and line pipe. The assured future of the area indicates that the industry will call for many more millions of feet. For the oil men of North Texas, like those of every other petroleum area in the world, have learned through experience, that the orange bands on pipe are the mark of uniformly high quality and dependability.

Locations circled indicate Continental Supply Company stores.



Identify Youngstown Oil Country Tubular Goods by the orange band or bands.

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Index TO STATISTICAL TABLES AND CHARTS

YEARBOOK-FORECAST NUMBER

COMPLETIONS:
Average annual depth of U. S. completions since 1925. 118
Average depth of completions by states 1945-1946... 121
Completion forecast for 1947 by states..... 112
Completions by companies..... 126
Completions in U. S. by years..... 115
Completions by states in 1946-1945..... 116
(The above two tables show oil wells, distillate wells, dry holes, gas wells, gas input wells, water input wells, water disposal wells, and old wells drilled deeper.)
Drilling forecast for 1947 by states..... 112
Drilling footage forecast by states for 1947..... 112
Footage drilled yearly in U. S. since 1925..... 118
Footage drilled in 1945-1946 by states and for various types of completions..... 121
Wildcat wells completed yearly in U. S.....132 and 135
Wildcat wells completed by states in 1946...132 and 135
Wildcat oil, gas and dry wells by states in 1946.....132 and 135
Wildcat wells completed, by companies..... 126

CONSUMPTION:
See **Demand.**

CRUDE RESERVES:
Of U. S. at end of 1945 and 1946..... 143
Of individual states at end of 1945 and 1946..... 143
New oil found in United States during 1946..... 143
New oil found in 1946 by states..... 143

DEMAND:
All oils since 1918 by years and domestic-export.... 76
Comparison with production and stock changes for oils, crude oil, motor fuel, gasoline, kerosine, distillate fuel oil, and residual fuel oil...77
Forecast of petroleum demand by products..... 74
Motor fuel annually since 1918 and domestic-export...76
Summary comparison for crude petroleum and principal refined products 1946 and other recent years..... 76

DISTILLATE:
See **Completions** for wells drilled.
See **Natural Gasoline** for production.

DRILLING:
See **Completions** for wells, footage drilled, etc.
Drilling depth records by states..... 125
Drilling forecast for 1947 by states..... 112
Drilling footage forecast for 1947 by states..... 112
Rigs in operation January 1, 1946, and 1947 by states (rotary and cable)..... 120

FIELD DISCOVERIES:
Average depths of new fields and new pays by states for 1946..... 132
New oil, gas and distillate fields, pays and extensions by states in 1946..... 132
Data on individual productive wildcats completed in 1946.....200 to 240
New oil, gas and distillate fields and pay horizons found annually in United States..... 130
Discovery year of different fields (by states and fields)..... 154 to 186

FOOTAGE DRILLED:
See **Completions.**

GEOPHYSICAL ACTIVITIES:
By types and by states in 1946..... 240

IMPORTS:
U. S., annual and daily average for crude and products, by years..... 96

NATURAL GASOLINE:
Annual and daily average production in United States..... 98
Annual production by years by states..... 90

NATURAL GAS:
See **Completions** for wells completed.
Production by years by states..... 102
Pipe line mileage built annually..... 144
Production for leading states in 1946..... 101
U. S. production annually..... 100
U. S. producing wells..... 100
Reserves by states..... 101

OIL FOUND:
See **Crude Reserves.**

OIL PRODUCTION:
Comparison of U. S. production with rest of world since 1918 by years..... 78
Comparison of U. S. daily production by states end of 1946, 1945 and 1941..... 86
Cumulative by U. S. states to end of 1946.....87 and 88
Daily average U. S. production by months in recent years..... 70
Individual field production for 1946 and cumulative.....154 and 186
Leading U. S. fields in cumulative production..... 94
Leading U. S. fields in daily output end of 1946..... 92
Production depth records by states..... 125
U. S. production by years since 1859..... 84
U. S. daily average production by years..... 84
U. S. production by states.....87 and 88
U. S. production by states, prewar and recent trends..86
Value of U. S. oil production by years since 1859.....87 and 88
World production by countries and continents by years since 1859.....81 to 83
World production, prewar and recent trends, by continents and countries..... 80
World annual and daily average production, U. S. and rest of world..... 78

PIPE LINES:
Mileage built, annually..... 144

PRODUCING WELLS:
See **Completions** for new producing wells annually.
At end of each year in U. S..... 106
End of 1946 and 1945 by states..... 108
Producing depth records by states..... 125
Pumping and flowing end of 1946 and 1945 by states. 108
Pumping and flowing end of 1946 by states and fields.....154 and 186

PRODUCTION:
See **Oil Production, Natural Gasoline and Natural Gas** for these data.
See **Refining Operations** for refined output.

PUMPING:
Forecast of wells to go on artificial lift in 1947..... 110
Forecast of 1947 pumping expenditures..... 110
Pumping wells end of 1946-1945 by states..... 108

REFINING OPERATIONS:
Crude runs to U. S. stills, annually..... 104
Crude runs by districts in 1946, 1945 and 1941..... 105
Daily U. S. crude runs by months in recent years..... 71
Major product output in 1946, 1945 and 1941..... 105
Percent of refinery capacity used by districts..... 105
Percent yield of various products..... 105

STOCKS OR STORAGE:
Crude oil by grades end of years 1941, 1945 and 1946. 91
Days' supply in storage end of each year for all oils and crude oil..... 90
Major petroleum refined products at end of 1941, 1945 and 1946 by districts..... 91

DEDICATED TO MAKING SUPPLY MEET DEMAND.

Your supply store has just "sweated out" some very difficult years. A "sellers market," so called, is the worst kind of market for men and institutions so long dedicated to making supply meet demand through service and adequate stocks.

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Now that it seems we again may be approaching a normal market, the supply man soon hopes to resume his normal function . . . that of making supply meet demand . . . and doing it in a manner that is easy and pleasant for you. His tremendous inventories . . . representing an estimated 100 million dollar investment . . . are readily available to you.

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LARKIN
...Through Your Supply Store

THE CHANGING Panorama —1946-1947—

THE Petroleum industry of the United States is entering an exceedingly bright economic period in which it will be called upon to produce and process record breaking quantities of both oil and gas to fulfill rising consumptive requirements. Having failed to experience predicted postwar drastic decreases in demand and production, the industry can look forward to the future with confidence that new all-time peaks are assured.

There is nothing on the horizon now that appears likely to alter for several years the industry's current highly satisfactory position. Fears exist that the gigantic industry of the United States is likely to be stifled by a surplus of low cost foreign oil. However, prospective gains in consumption indicate this certainly cannot occur before the recently announced Middle East pipe line building program is completed and begins to throw enormous additional quantities onto the international market. In this connection, it is significant that only one of the pipe line outlets planned for the Middle East area, a relatively small-capacity system already under construction, can be placed in operation before 1950. Meanwhile, growing demand should absorb increased production, and by 1950 consumption may require much of the prospective gain in Middle East production.

Highlights of 1946 . . .

NINETEEN forty-six, being the first full postwar year, was truly a noteworthy period for the United States petroleum industry. Sharp reductions from wartime peaks had been anticipated, but contrary to these expectations all operations either rose to all-time highs or remained at near previous record levels.

Here are 1946 highlights:

a) Consumption of petroleum surprised everyone by remaining almost equal to the peak established with the aid of huge military usage in 1945.

b) Petroleum supplies were far above expected rates. In addition to producing the greatest amount of crude oil and natural gasoline in history, the United States also imported unusually large quantities of foreign oil.

c) Refining plants of the country processed more crude oil than ever before, thereby making record quantities of products.

d) Along with the benefits of high producing and consuming rates, the industry enjoyed higher prices, especially in the latter part of the year, and thus experienced larger incomes. Again, this was contrary to predictions, for both producers and refiners had expected to face sharply curtailed incomes in view of anticipated reductions in the output of wells and plants from wartime peaks.

e) Marketed production of natural gas also soared to another new peak, including a much greater quantity of gas taken from oil wells.

f) The materials situation improved, and with production and prices higher, the industry found both the ability and the incentive to drill many more wells in the search for oil than forecast.

g) Temporary difficulties were occasionally encountered in pruchasing operating materials, but, as a whole, such favorable conditions existed in 1946 that the industry really experienced only one serious problem. This was the adjustment of refining plant yields to fit various changes in demand for different products. This problem was met with fair success, although not without some refined product stocks rising so steadily and rapidly during the year that they reached a point where they soon could have become distressing.

Prospects for 1947 . . .

WITH the surprisingly favorable conditions that existed in 1946 forming an excellent basis, the industry can look to a banner year in 1947. Here are the prospects:

a) Consumption certainly will exceed all previous levels, a sharp increase being due as newly made automobiles gain.

b) Under these conditions, crude oil necessarily must be produced and imported at unprecedented rates.

c) Natural gasoline and natural gas production likewise will be needed in record quantities.

d) Refining plants will have to operate at peak rates, but some care must be exercised to see that stocks of refined products are not permitted to increase above year-end volumes.

e) Prices should hold steady, perhaps increase, if refined oil inventories are not allowed to get out of balance with needs. Even if prices remain at present levels, the industry will benefit through having currently higher values throughout the full year instead of only part of the year as in 1946.

f) Exploratory activity should continue to expand and once more be at prewar levels, with tests seeking new oil or gas fields drilled at the highest rate ever.

Surpising Demand . . .

HAVING witnessed an extremely small reduction in demand for petroleum in 1946 despite cessation of the war, the United States assuredly will require petroleum in larger quantities than ever before.

Total demand for all oils in 1946 averaged 5,305,000 barrels daily, down only 43,000 barrels from the peak reached in 1945. This was less than 1 percent under 1945 and 28 percent (936,000 barrels) above the 1941 level. It was in contrast with a predicted decline of 400,000 barrels daily.

The decrease was due solely to lower export shipments, which were 93,000 barrels per day less than in the preceding year. It is significant and also surprising that domestic demand actually established a new all-time record, exceeding 1945's rate by 50,000 barrels daily.

With demand in the first full postwar

year much higher than anticipated, the stage has been prepared for the use in 1947 of more United States oil than ever before. Total consumption in 1947, it is estimated, will average 5,617,000 barrels daily, an increase of 312,000 barrels over 1946. Daily average domestic demand is expected to be 302,000 barrels higher as automobiles return to the highways in larger numbers.

Production, Imports . . .

UNITED States crude oil producers enjoyed a much better year in 1946 than had been foreseen, and can expect this improvement to continue in 1947.

Curtailment of United States crude oil production was expected to be one of the serious postwar problems of the industry, but instead of a sharp reduction there was a gain of 58,000 barrels daily, or 20 million barrels annually, as more crude was produced than ever before. Crude oil production totaled 1,731,889,000 barrels during the year, a daily average of 4,744,000 barrels. This record was established although imports of foreign petroleum rose sharply.

Refiners charged most of the oil produced to stills, despite the slight drop in demand. Consequently, crude oil stocks changed only slightly during the year, which left them still quite low following heavy drafts during the war.

Even after making allowances for increased output of natural gasoline and the importation of larger amounts of foreign oil, forecast demand for 1947 will require that the United States produce a record breaking quantity of crude

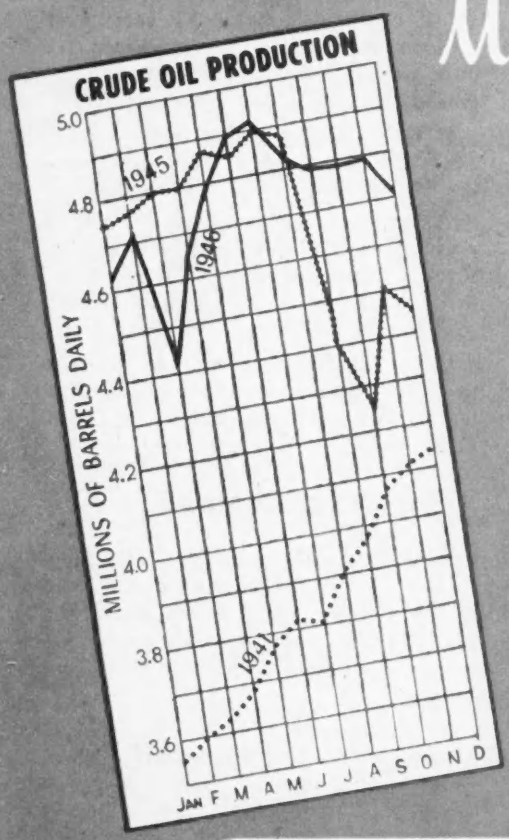
Must Watch Stocks . . .

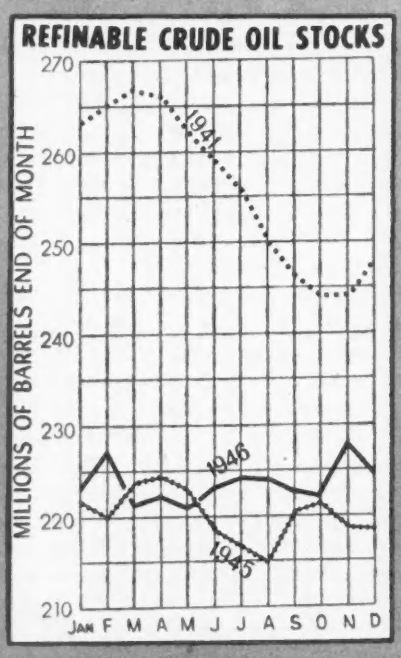
THE industry's stock position was not as encouraging at the beginning of 1947 as it was at the start of 1946, due to the addition of large quantities of refined products. However, the inventory position is still considered fairly satisfactory.

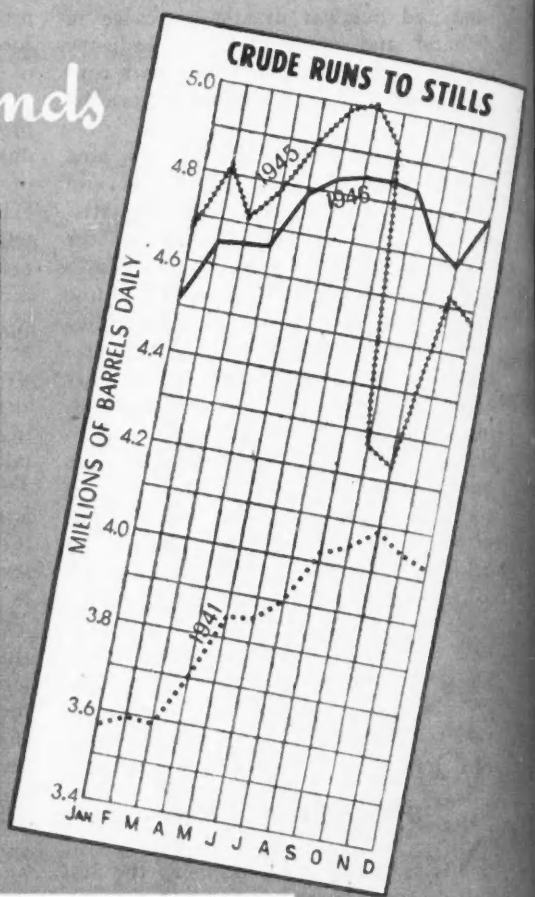
Following sharp reduction of stocks during the war years, an increase of 129,000 barrels daily in inventories of all oils during 1946 was not excessive. Unfortunately, however, most of the increase occurred in fuel oils, which, if continued, would be burdensome.

It appears advisable that crude oil

Monthly Oil Trends







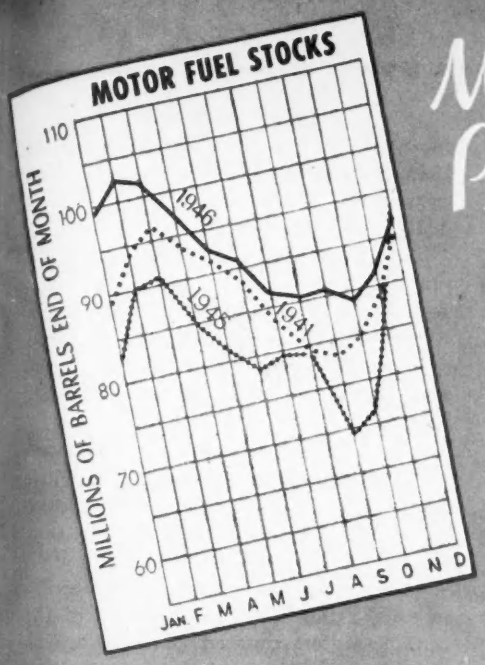
Crude Production, Stocks and Runs

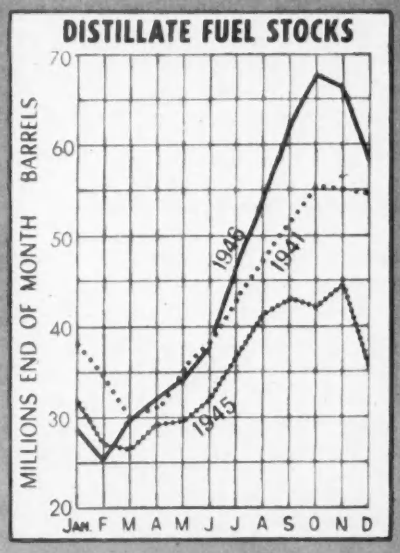
(All Figures in Thousands of Barrels—Add 000)

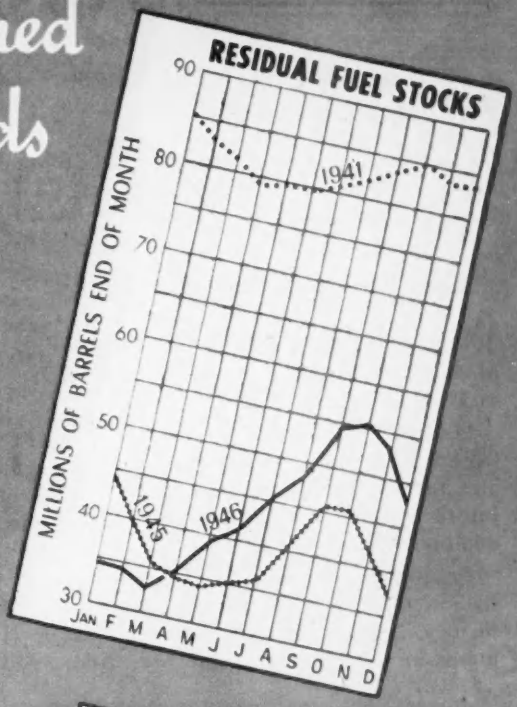
MONTH	DAILY AVERAGE CRUDE PRODUCTION			REFINABLE CRUDE STOCKS END OF MONTH			DAILY AVERAGE RUNS TO STILLS		
	1946	1945	1941	1946	1945	1941	1946	1945	1941
January	4,625	4,748	3,563	223,442	221,737	263,881	4,520	4,680	3,570
February	4,719	4,759	3,595	227,220	220,221	265,062	4,651	4,817	3,587
March	4,414	4,799	3,634	221,400	223,988	267,005	4,661	4,719	3,582
April	4,673	4,801	3,685	222,480	224,229	266,637	4,663	4,774	3,704
May	4,785	4,870	3,772	221,592	223,151	262,731	4,794	4,913	3,853
June	4,896	4,854	3,829	223,140	218,218	259,695	4,836	4,989	3,865
July	[1]4,922	4,891	3,801	224,351	216,638	255,998	4,856	[1]5,001	3,909
August	4,836	4,870	3,908	224,157	[3]215,135	250,240	4,856	4,928	4,018
September	4,790	4,413	3,977	222,417	220,642	246,731	4,839	4,275	4,049
October	4,785	4,277	4,061	222,177	221,246	244,355	4,736	4,244	[2]4,089
November	4,792	4,508	4,116	227,693	218,916	244,299	4,695	4,624	4,051
December	4,702	4,468	[2]4,143	224,836	218,763	247,499	4,810	4,574	4,032

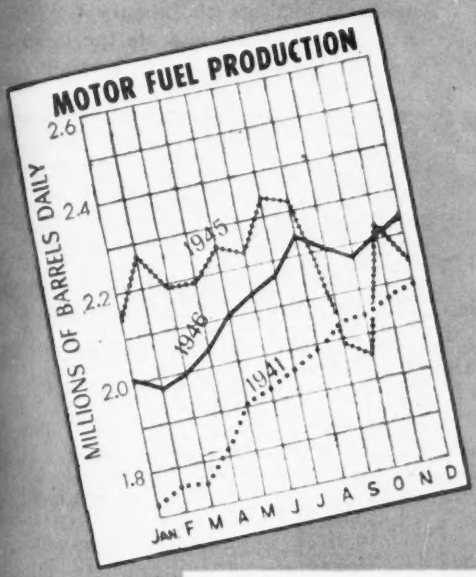
[1] All-time peak. [2] Pre-war peak. [3] Lowest since 1921.

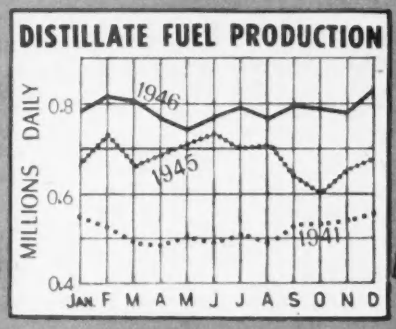
Monthly Refined Product Trends

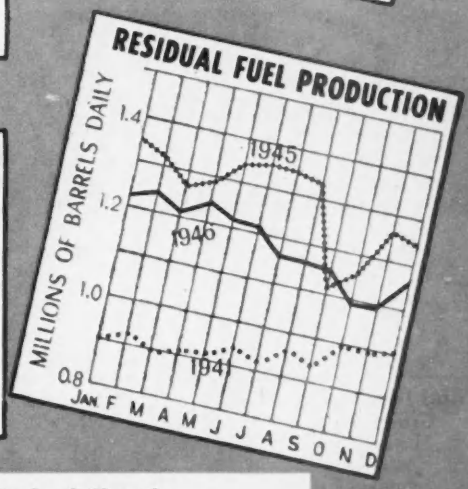












Stocks of Principal Refined Products at End of Month

(All Figures in Thousands of Barrels—Add 000)

MONTH	MOTOR FUEL			RESIDUAL FUEL OIL			DISTILLATE FUEL OIL		
	1946	1945	1941	1946	1945	1941	1946	1945	1941
January	99,149	83,037	88,800	34,573	44,347	85,092	28,990	31,695	37,926
February	102,136	90,091	93,920	34,008	39,760	82,902	25,511	27,210	34,790
March	101,844	90,298	96,832	32,995	35,451	81,634	29,922	26,729	29,805
April	97,426	84,436	93,918	35,206	34,418	79,138	32,064	29,148	31,725
May	92,805	82,024	91,281	38,932	34,333	79,218	33,885	29,511	35,389
June	91,069	78,812	88,646	41,492	35,606	79,948	38,824	32,440	38,274
July	86,718	78,798	83,746	45,446	38,341	80,760	46,439	36,276	43,037
August	85,776	78,318	79,205	48,186	42,227	82,268	54,068	41,245	47,163
September	85,908	69,474	78,134	54,012	42,822	83,752	62,019	45,059	51,412
October	83,940	71,998	79,568	55,580	42,068	84,960	67,870	45,479	55,385
November	86,546	82,416	83,953	53,133	41,322	83,730	66,062	44,562	55,073
December	92,089	93,682	90,688	47,649	37,158	83,195	58,554	35,778	49,926

Daily Average Production of Principal Refined Products

(Figures in Thousands of barrels—add 000)

MONTH	MOTOR FUEL			RESIDUAL FUEL OIL			DISTILLATE FUEL OIL		
	1946	1945	1941	1946	1945	1941	1946	1945	1941
January	2,004	2,150	1,722	1,224	1,350	902	787	663	549
February	1,982	2,268	1,755	1,243	1,326	928	823	724	526
March	1,997	2,192	1,749	1,213	1,273	899	816	675	494
April	2,037	2,192	1,816	1,247	1,289	910	773	681	489
May	2,103	2,251	1,906	1,220	1,341	916	753	708	501
June	2,145	2,232	1,922	1,219	[1]1,351	942	777	730	490
July	2,176	[1]2,339	1,954	1,163	[1]1,351	923	793	713	508
August	2,249	2,333	1,986	1,159	1,329	962	765	701	497
September	2,209	2,003	2,036	1,150	1,139	937	796	640	534
October	2,171	1,955	2,041	1,090	1,176	996	788	613	534
November	2,215	2,229	2,073	1,093	1,265	989	779	665	541
December	2,242	2,131	[2]2,083	1,162	1,245	[2]1,004	[1]836	683	[2]553

[1] All-time peak. [2] Prewar peak.

production and crude runs to stills should be kept closely in balance with demand volumes during 1947. This is the one problem that the industry faces this year, and with demand to be very high, it should not prove troublesome.

Gas Outlook Bright . . .

NATURAL gas will be very much in the limelight during 1947, as it was in 1946.

Marketed production of natural gas experienced another sharp gain in 1946, and further growth is assured for the future by plans for the construction of additional pipe line systems.

Production during 1946 exceeded 4 trillion cubic feet for the first time in history. Sales of natural gas have been increasing sharply for some time past, and are likely to grow at accelerated rates in coming years.

The Federal Power Commission has approved the construction of 4985 miles of new natural gas lines with a daily capacity of 1¾ billion cubic feet. These lines will be placed in operation during the next two years. In addition, the FPC has not yet acted upon applications that would result in other lines having an equal carrying capacity.

Intensive Oil Search . . .

THE industry drilled a record number of wildcats in an intensive search for new oil and gas sources during 1946, and with the same favorable factors existing is due to expand such efforts during 1947.

During 1946, the industry completed 4830 exploratory tests in contrast with the previous peak of 4510 completed in 1945. It is quite significant that wildcats constituted 13.9 percent of all wells drilled last year.

This strenuous effort resulted in the finding of 411 new oil and gas fields and in the discovery of 276 new producing horizons in previously found pools. The totals were made up of 308 new oil fields and 205 new oil producing horizons.

The successful wildcat drilling program resulted in the discovery of 2,192,749,000 barrels of new oil in the United States. After allowing for the record production, the nation's reserves on January 1, 1947, were estimated at 21,287,673,000 barrels, or 460,860,000 barrels greater than the total reserves estimated by the American Petroleum Institute on January 1, 1946.

Present conditions indicate the industry will step up wildcatting operations to

Salient Annual Statistics

	THOUSANDS OF BARRELS						
	1946	Percent Change from 1945	1945	1944	1943	1942	1941
Total Demand (All Oils)	**1,936,510**	**— 0.8**	**1,952,140**	**1,878,673**	**1,671,383**	**1,566,815**	**1,594,609**
Crude Oil	1,811,661	+ 1.3	1,788,709	1,743,828	1,510,829	1,411,552	1,470,044
Motor Fuel	778,525	— 0.9	785,257	737,163	619,815	624,207	694,588
Kerosene	97,850	+19.7	81,753	76,700	73,350	72,343	72,690
Residual Fuel Oil	484,094	— 9.5	535,001	524,624	481,902	417,792	397,536
Distillate Fuel Oil	274,239	+ 5.6	259,580	252,885	233,067	207,236	189,749
Domestic Demand, Total	**1,786,002**	**+1.0**	**1,767,867**	**1,669,762**	**1,521,426**	**1,449,908**	**1,485,779**
Total Exports	**150,508**	**—18.3**	**184,273**	**208,911**	**149,957**	**116,907**	**108,830**
Crude Production	**1,731,889**	**+ 1.2**	**1,711,103**	**1,677,753**	**1,505,613**	**1,386,645**	**1,402,228**
Crude Runs to Stills (Total)	**1,731,458**	**+ 0.7**	**1,719,534**	**1,665,584**	**1,429,738**	**1,334,103**	**1,409,192**
Natural Gasoline Production	**114,932**	**+ 3.3**	**111,274**	**100,046**	**87,716**	**83,322**	**80,855**
Major Product Production:							
Motor Fuel	776,932	— 2.8	799,059	743,484	608,180	608,900	701,294
Kerosene	104,425	+28.9	81,024	78,344	72,270	67,474	72,586
Residual Fuel Oil	431,205	— 8.2	469,492	461,455	417,306	358,901	342,367
Distillate Fuel Oil	288,445	+15.7	249,224	239,152	211,516	196,714	189,177
Imports, Total	**134,698**	**+18.8**	**113,373**	**92,256**	**63,412**	**35,966**	**97,142**
Crude Petroleum	87,053	+17.5	74,095	44,805	13,833	12,297	50,606
Refined Products	47,645	+21.3	39,278	47,451	49,579	23,669	46,536
Stocks End of Year (All Oils)	**510,658**	**+11.2**	**463,579**	**477,089**	**485,698**	**497,940**	**552,328**
Refinable Crude Oil	224,836	+ 2.8	218,763	220,862	243,506	234,889	247,499
Heavy California Crude	5,704	+26.9	4,496	6,107	8,289	10,865	10,179
Natural Gasoline	6,500	+50.4	4,322	4,252	4,541	4,632	4,275
Refined Product Stocks	273,618	+15.9	235,998	245,868	229,362	247,554	290,375
Motor Fuel	92,089	— 1.7	93,682	77,874	69,505	75 404	90,688
Kerosene	16,996	+63.1	10,421	11,150	9,359	10,064	9,599
Residual Fuel Oil	47,649	+28.2	37,158	50,383	48,484	61,783	83,195
Distillate Fuel Oil	58,554	+63.7	35,778	38,333	41,728	44,940	49,926
Crude Reserves End of Year	**21,287,673**	**+ 2.2**	**20,826,813**	**20,453,231**	**20,064,152**	**20,082,793**	**19,589,296**
New Oil Proved to Exist	**2,192,749**	**+ 3.9**	**2,110,299**	**2,067,500**	**1,484,786**	**1,878,976**	**1,968,963**

exceed this peak rate, with more than 5200 expected to be completed during 1947.

To Drill More Wells . . .

THE need for large volumes of crude oil and the existence of the highest crude oil prices in five years will encourage the industry to engage in an extensive drilling program during 1947.

United States drilling rates during 1946 rose sharply, returning to near normal levels. Exclusive of old wells drilled deeper, which amounted to 619,, a total of 30,221 wells were completed last year, 3572 more than in 1945.

An even greater number should be drilled during 1947. Indications are that at least 31,048 new wells will be drilled during the year, with the total likely to rise to around 32,500 if labor difficulties at steel mills and coal mines do not cause equipment shortages.

Pipe Line Work Booms . . .

PIPE line construction is on the threshold of an exceptionally active period, and during 1947 may outstrip any previous year.

Despite the shortage of pipe, nearly 1000 more miles of new pipe lines were placed in operation in the United States during 1946 than in 1945. A total of 4141 miles of new lines was put in operation during the year as compared with 3211 in 1945. Construction was divided as follows: 1127 miles of natural gas lines, 1404 miles of product lines, and 1610 miles of crude oil lines.

Present activity indicates that 1947 is to see an unusually sharp increase in pipe line construction. At the end of 1946, there were 6442 miles of line actually under construction in the United States, and an additional 2600 miles are known to be planned. New pipe lines to be placed in operation within the United States during 1947 should exceed 8000 miles with more than half natural gas pipe lines.

World Output Rising . . .

PRODUCTION of other countries is rising more sharply than that of the U. S., and this trend is due to continue.

World production of crude oil in 1946 averaged 7,643,600 barrels per day, 451,300 barrels greater than in 1945.

The sharp advance in world crude producing rates was due largely to production records set in the Middle East and Venezuela, a trend that also should continue during 1947.

...s of the United States!

	1946						
	Amount or Numbers	Percent Change from 1945	1945	1944	1943	1942	1941
Total No. of New Fields and Pays Found	**687**	**+ 6.2**	**647**	**633**	**499**	**523**	**650**
New Oil Discoveries	**513**	**+ 8.0**	**475**	**475**	**403**	**451**	**562**
New Fields	308	— 2.8	317	326	276	288	301
New Pays	205	+ 29.7	158	149	127	163	261
New Gas Discoveries	**103**	**— 19.5**	**128**	**117**	**72**	**57**	**83**
New Fields	74	— 34.5	113	102	56	47	58
New Pays	29	+ 93.3	15	15	16	10	25
New Distillate Discoveries	**71**	**+ 61.4**	**44**	**41**	**24**	**15**	**5**
New Fields	29	— 3.3	30	32	15	13	3
New Pays	42	+200.0	14	9	9	2	2
Wildcats Drilled (Including Outposts)	**4,830**	**+ 7.1**	**4,510**	**4,325**	**3,631**	**3,175**	**3,697**
Productive	935	+ 6.6	877	805	644	523	650
Non-Productive	3,895	+ 7.2	3,633	3,520	2,987	2,652	3,047
Completions, Total	**30,840**	**+ 13.6**	**27,140**	**26,163**	**20,820**	**22,578**	**33,332**
Oil Wells	15,962	+ 14.5	13,944	13,502	9,887	10,977	19,590
Gas Wells	3,303	+ 8.7	3,039	3,024	2,314	2,685	3,279
Distillate Wells	207	+ 35.3	153	54	76	105	.....
Dry Holes	8,503	+ 15.8	7,346	7,153	6,364	5,962	7,280
Gas Input Wells	380	+ 15.5	329	218	90	73	117
Water Input Wells	1,816	+ 1.1	1,796	1,784	1,576	2,141	2,197
Water Disposal Wells	50	+ 19.0	42	51	42	47	47
Old Wells Drilled Deeper	619	+ 26.1	491	377	471	588	822
Footage Drilled (Thousands of Feet)	**101,379**	**+ 8.8**	**93.159**	**84,592**	**62,212**	**68,146**	**99,705**
Producing Oil Wells End of Year	**424,286**	**+ 1.3**	**419,045**	**412,851**	**407,581**	**407,257**	**403,582**
Flowing Wells	48,387	— 0.1	48,456	47,191	46,562	47,270	47,749
Pumping Wells	375,899	+ 1.4	370,589	365,660	361,019	359,987	355,833
Pipe Line Construction (Miles)	**4,285**	**+ 29.0**	**3,211**	**4,961**	**7,671**	**7,550**	**7,300**
Oil Lines Completed	1,610	+ 9.5	1,470	2,219	3,795	4,200	2,900
Gas Lines Completed	1,271	— 29.5	1,598	2,224	262	1,250	1,700
Product Lines Completed	1,404	+881.8	143	518	3,614	2,100	2,700
Natural Gas Marketed Prod. (billion cu. ft.)	**4,040**	**+ 4.3**	**3,875**	**3,780**	**3,415**	**3,053**	**2,813**

Demand Growth Confronts With Need for Increased

Probable 1947 consumption indicates nation will require 355,000 barrels more oil daily even with higher imports

By L. J. LOGAN
Associate Editor

IN 1947 the petroleum industry of the United States will encounter and supply a new all-time record total demand for all oils. Even in 1946, the first full postwar year, total demand for only 8/10 of 1 percent less than the record demand experienced in 1945, the final war year.

It is here estimated that the total demand for all oils in 1947 will average 5,617,000 barrels daily, an increase of 5.9 percent over 1946 and approximately 28 percent more than in 1941, last prewar year for the United States.

It is noteworthy that even in 1946 a new all-time record was set for domestic demand, representing about 92 percent of all demand. The domestic demand of 1946 was 1 percent greater than that of 1945, and for 1947 an increase of 6.2 percent is here forecast. The domestic demand will average 5,195,000 barrels daily, it is estimated.

Exports were 18.3 percent lower in 1946 than in 1945, but for 1947 a small increase of 2.4 percent to an average of 422,000 barrels daily is here estimated because new refinery installations in foreign areas have not kept pace with increasing foreign demand and are not expected to do so in 1947.

Forecast of Petroleum Demand and Supply, 1947, Compared with Other Years

Data for 1947 estimated by The Oil Weekly, with aid of forecasts by Bureau of Mines and private company economists. Prior years from Bureau of Mines except November and December, 1946, estimated with aid of A.P.I. statistical bulletins.

THOUSANDS OF BARRELS DAILY

ITEM	1941	1945	1946	% Diff. '45-'46	Forecast 1947	% Diff. '46-'47
DEMAND						
Total Demand, All Oils	4,369	5,348	5,305	— 0.8	5,617	+ 5.9
Domestic	4,071	4,843	4,893	+ 1.0	5,195	+ 6.2
Export	298	505	412	—18.3	422	+ 2.4
Motor Fuel, Total	1,903	2,151	2,133	— 0.9	2,292	+ 7.5
Domestic	1,829	1,908	2 010	+ 5.4	2,182	+ 8.6
Export	74	243	123	—49.6	110	—10.6
Kerosene, Total	199	224	268	+19.7	277	+ 3.4
Domestic	190	207	246	+18.8	252	+ 2.4
Export	9	17	22	+30.7	25	+13.6
Distillate Fuel Oil	520	711	751	+ 5.6	815	+ 8.5
Domestic	474	618	670	+ 8.4	715	+ 6.7
Export	46	93	81	—12.8	100	+23.5
Residual Fuel Oil	1,089	1,466	1,326	— 9.5	1,342	+ 1.2
Domestic	1,050	1,433	1,300	— 9.3	1,315	+ 1.2
Export	39	33	26	—20.1	27	+ 3.8
Lubricants	110	115	126	+ 9.8	133	+ 5.6
Domestic	83	97	97	+ 0.5	103	+ 6.2
Export	27	18	29	+59.6	30	+ 3.4
Other Products & Ref. Losses	419	557	553	— 0.7	612	+10.7
Domestic	407	546	537	— 1.6	590	+ 9.9
Export	12	11	16	+45.5	22	+37.5
Crude (as fuel, losses, exports)	129	124	148	+19.4	146	— 1.4
Domestic	38	34	33	— 3.0	38	+15.2
Export	91	90	115	+27.3	108	— 6.1
Change in Stocks, All Oils	—30	—37	+129	.....	+15	.....
Crude Oil	—52	—10	+ 20	.....	+14	.....
Natural Gasoline	— 4	.....	+ 6	.....	+ 1	.....
Refined Products	+26	—27	+103	.....	.....	.....
NEW SUPPLY						
Total New Supply	4,339	5,311	5,434	+ 2.3	5,632	+ 3.6
Domestic Production, Total	4,073	5,001	5,065	+ 1.3	5,238	+ 3.4
Crude Oil	3,842	4,668	4,745	+ 1.2	4,901	+ 3.3
Natural Gasoline & Benzol	231	313	320	+ 2.2	337	+ 5.3
Imports, Total	266	310	369	+19.0	394	+ 6.8
Crude Oil (specialties & heavy)	139	203	238	+17.5	244	+ 2.5
Refined Products (mostly residual fuel and marine diesel)	127	107	131	+22.4	150	+14.5
Crude Oil Run to Stills	3,861	4,711	4,744	+ 0.7	4,915	+ 3.6

Larger Supplies Needed

To meet the demand of 1947 as forecast above, it is here estimated that there will be moderate increases in both imports and domestic production of oils, with little or none of total supply met from storage. It is estimated, in fact, that new supply will slightly exceed demand because of adding 1000 barrels daily average to natural gasoline stocks and 14,000 barrels daily to crude oil storage, with stocks of refined products showing no net change for the year in the aggregate. The moderate increase in crude stocks is allowed for because some further build-up may be found desirable in some areas.

As regards stocks of refined products, it is to be expected that inventories of individual products will not be the same at the end of 1947 as at the end of 1946, but these changes may largely offset each other. It is probable that motor fuel stocks will be increased in reflection of increasing demand. But this increase may be offset by reduction of stocks of residual fuel oil, as some difficulty in meeting slightly higher residual demand may occur, due to lower yields attending refinery improvements and efficiencies. Kerosine stocks also would be sufficient at somewhat lower levels. Distillate fuel stocks were increased sharply in 1946 and further important net increase for the year 1947 does not appear likely.

On the basis of demand and stock changes estimated above, new supply for the year will have to average 5,632,000 barrels daily. This will be a new all-time record and an increase of 3.6 percent over the domestic production and imports of 1946, despite the fact that 1946 production was artificially high in a postwar heavy rebuilding of war-depleted stocks.

A part of the increase of supply to meet requirements quite possibly will be obtained by moderately increasing imports, especially because of the previously mentioned prospect of some difficulty in meeting demand for residual fuel oil. It is here forecast that total imports will average 394,000 barrels daily in 1947, an increase of 6.8 percent over the 369,000 daily indicated for 1946. Crude oil imports are estimated at 244,000 barrels daily or 2.5 percent above the 238,000 daily of 1946. Imports of refined products, consisting mostly of residual fuel oil and marine diesel oil, are estimated at 150,000 barrels daily for 1947, up 14.5 percent from the 131,000 daily of 1946.

Some increase of supply will be afforded by further stepping up the production of natural gasoline and allied products to an estimated 337,000 barrels daily in 1947 from 320,000 daily in 1946, a 5.3 percent increase.

Finally, the indicated necessary supply

United States Oil Supplies

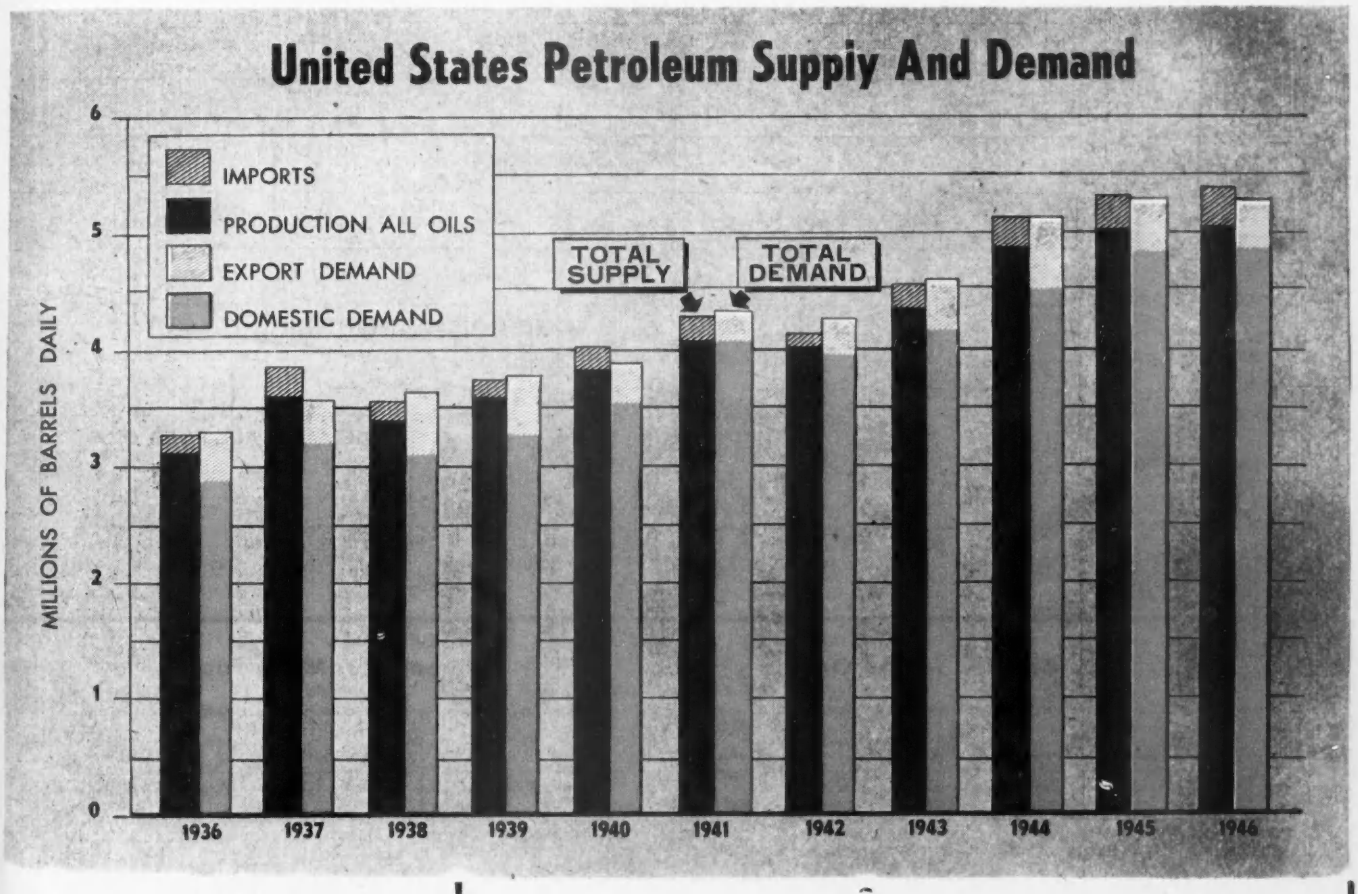
for meeting current demand and permitting a small increase in stocks will require domestic crude oil production averaging 4,901,000 barrels daily, according to this forecast. This rate of crude oil production would be 3.3 percent above the 4,745,000 barrels daily recorded for 1946 and would set a new record. It would be 27.6 percent above the 3,842,000 barrels daily of 1941. While the indicated production rate for 1947 would crowd the nation's producing ability, crude output actually reached a peak of 4,922,100 barrels daily in July, 1946, and development of new reserves has been fairly satisfactory.

New High for Runs to Stills

Fulfillment of the above estimates of demand would indicate crude runs to stills at United States refineries averaging 4,915,000 barrels daily in 1947. This would be a new all-time record, 27.3 percent above the 3,861,000 barrels daily charged to stills in 1941. It would be 3.6 percent above the 4,744,000 barrels daily of runs in 1946, although the latter were artificially high, having resulted in the increase of total refined-product stocks by an average of 103,000 barrels daily.

This forecast of demand and supply in 1947 takes advantage of the views and expectations of several oil company economists as well as the 1947 forecast data which the Bureau of Mines embodied in its Monthly Petroleum Forecast for December, dated December 13, 1946.

This estimate of a 5.9 percent increase in total demand for 1947 is slightly higher than some other estimates, which have indicated gains of 4 to 5 percent, but this is not a great difference in estimating for a whole year in advance. The higher estimate is due primarily to an effort to avoid underestimating the demand for motor fuel. This forecast allows for a 7.5 percent increase in total motor fuel demand, reflecting especially the increased production of automobiles. It is estimated that slightly over 29 million passenger cars will be registered at the end of 1947, compared with about 27.2 million at the end of 1946, on the basis of production of 4 million, export of 200,000, and scrapping of 2 million during the year. Motor trucks and buses will be produced and scrapped at such rates as to increase registrations to 5,725,000 from 5,500,000, it is estimated. Other uses of motor fuel are similarly taken carefully into account in the estimate here used. This forecast also puts indicated demand for lubricating oils slightly higher than some other esti-



Thousands of Barrels Daily

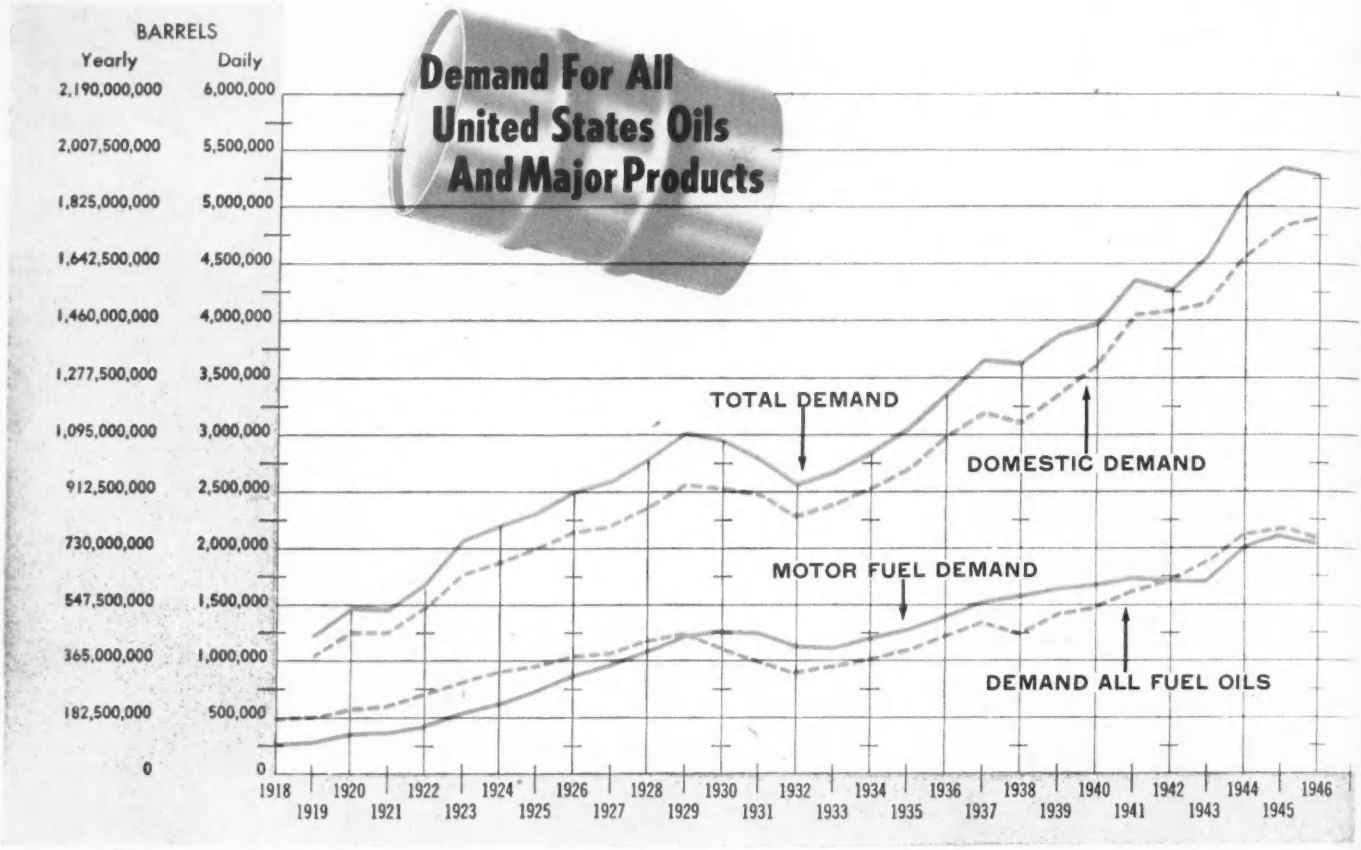
YEAR	SUPPLY			DEMAND			Change In All Stocks[5]
	Production All Oils[1]	Total Imports[2]	Total New Supply	Domestic Demand[3]	Exports & Shipments[4]	Total Demand	
1936	3,128	156	3,284	2,986	360	3,346	— 62
1937	3,647	157	3,804	3,205	473	3,678	P+126
1938	3,472	149	3,621	3,115	531	3,646	— 25
1939	3,614	162	3,776	3,373	518	3,891	—115
1940	3,858	229	4,087	3,625	356	3,981	+106
1941	4,073	266	4,339	4,071	298	4,369	— 30
1942	4,034	99	4,133	3,972	321	4,293	—160
1943	4,372	174	4,546	4,168	411	4,579	— 33
1944	4,864	252	5,116	4,562	571	5,133	— 17
1945	5,001	310	5,311	4,843	505	5,348	— 37
1946	5,065	369	5,434	4,893	412	5,305	+129

[1] Includes crude oil, natural gasoline, related products and bensol. [2] Includes both refined and crude oils. [3] Includes military and civilian demand in continental United States and shipments to U. S. armed forces abroad. [4] Includes shipments to non-contiguous territories. [5] Includes changes in both refined and crude oil stocks. Minus signs indicate decreases and plus signs increases.

Data from Bureau of Mines, except November and December, 1946, estimated by The OIL WEEKLY.

mates in seeking to allow adequately for use by motor vehicles. Demand for distillate fuel oil is estimated a little higher here than in some forecasts in the expectation that construction activity and new oil burner installations will make for higher domestic consumption and that exports will be considerably greater.

Forecasts of 1947 demand for kerosine and residual fuel oil as shown in the table herewith are exactly as estimated by the Bureau of Mines. The residual forecast is qualified here, however, by stating that one oil company economist estimates residual demand 60,000 barrels a day lower than the bureau. That private estimate does not question the bureau forecast as potential demand if supplies were available but assumes a 60,000 barrels per day deficiency of supply. This expected deficiency would result from a decline in residual production in domestic refineries, due to improved equipment and increased refinery efficiency, and from limited availability of residual fuel oil for import. In this forecast it is assumed that at least a part of such deficiency could be supplied from storage, but residual stocks are still comparatively low, and if they supplied more than a third of the assumed deficiency, they would approach critically low levels



Demand for All Oils — Demand for Motor Fuel

(All Figures in Barrels)

YEAR	Demand for All Oils: TOTAL (Domestic and Export) Annual Total	Demand for All Oils: TOTAL (Domestic and Export) Daily Average	Demand for All Oils: DOMESTIC Annual Total	Demand for All Oils: DOMESTIC Daily Average	Demand for All Oils: EXPORTS Annual Total	Demand for All Oils: EXPORTS Daily Average	Demand for Motor Fuel: TOTAL (Domestic and Export) Annual Total	Demand for Motor Fuel: TOTAL (Domestic and Export) Daily Average	Demand for Motor Fuel: DOMESTIC Annual Total	Demand for Motor Fuel: DOMESTIC Daily Average	Demand for Motor Fuel: EXPORTS Annual Total	Demand for Motor Fuel: EXPORTS Daily Average
1918	.....	.....	.....	.....	.....	.....	93,599,000	256,400	79,949,000	219,000	13,650,000	37,000
1919	438,434,000	1,201,200	374,541,000	1,026,100	63,893,000	175,100	97,790,000	267,900	88,648,000	242,900	9,142,000	25,000
1920	535,382,000	1,462,800	455,764,000	1,245,300	79,618,000	217,500	124,623,000	340,500	108,945,000	297,700	15,678,000	42,800
1921	592,402,000	1,450,400	457,521,000	1,253,300	71,881,000	196,900	130,203,000	356,700	116,840,000	320,100	13,363,000	36,600
1922	605,540,000	1,659,000	530,990,000	1,454,800	74,550,000	204,200	152,132,000	416,800	137,770,000	377,500	14,362,000	39,300
1923	754,361,000	2,066,700	652,027,000	1,786,400	102,334,000	280,300	195,556,000	535,800	174,462,000	478,000	21,094,000	57,800
1924	805,070,000	2,199,600	687,742,000	1,879,100	117,328,000	320,500	225,737,000	616,800	196,586,000	537,100	29,151,000	79,700
1925	840,818,000	2,303,600	726,797,000	1,991,200	114,021,000	312,400	264,429,000	724,500	232,745,000	637,700	31,684,000	86,800
1926	912,893,000	2,501,100	780,487,000	2,138,300	132,406,000	362,800	311,897,000	854,500	268,128,000	734,600	43,769,000	119,900
1927	944,762,000	2,588,400	802,499,000	2,198,600	142,263,000	389,800	350,318,000	959,800	305,367,000	836,600	44,951,000	123,200
1928	1,014,716,000	2,772,400	859,759,000	2,349,000	154,957,000	423,400	392,293,000	1,071,800	338,881,000	925,900	53,412,000	145,900
1929	1,103,203,000	3,022,500	940,083,000	2,575,600	163,120,000	446,900	444,937,000	1,219,000	382,878,000	1,049,000	62,059,000	170,000
1930	1,083,511,000	2,968,500	927,016,000	2,539,800	156,495,000	428,700	463,184,000	1,269,000	397,609,000	1,089,300	65,575,000	179,700
1931	1,027,274,000	2,814,500	902,920,000	2,473,800	124,354,000	340,700	453,559,000	1,242,600	407,843,000	1,117,400	45,716,000	125,200
1932	938,757,000	2,564,900	835,482,000	2,282,700	103,275,000	282,200	413,229,000	1,129,000	377,791,000	1,032,200	35,438,000	96,800
1933	975,214,000	2,671,800	868,487,000	2,379,400	106,727,000	292,400	409,815,000	1,122,800	380,494,000	1,042,500	29,321,000	80,300
1934	1,034,672,000	2,834,700	920,165,000	2,521,000	114,507,000	313,700	435,025,000	1,191,800	410,339,000	1,124,200	24,686,000	67,600
1935	1,112,672,000	3,048,400	983,685,000	2,695,000	128,987,000	353,400	465,423,000	1,275,100	434,810,000	1,191,200	30,613,000	83,900
1936	1,224,748,000	3,346,300	1,092,754,000	2,985,700	131,994,000	360,600	510,252,000	1,394,100	481,606,000	1,315,800	28,646,000	78,300
1937	1,342,516,000	3,678,100	1,169,682,000	3,204,600	172,834,000	473,500	557,658,000	1,527,800	519,352,000	1,422,900	38,306,000	104,900
1938	1,330,850,000	3,646,200	1,137,122,000	3,115,400	193,728,000	530,800	573,112,000	1,570,200	523,003,000	1,432,900	50,109,000	137,300
1939	1,420,035,000	3,890,500	1,231,076,000	3,372,800	188,959,000	517,700	600,147,000	1,644,200	555,509,000	1,521,900	44,638,000	122,300
1940	1,457,086,000	3,981,100	1,326,620,000	3,624,600	130,466,000	356,500	614,867,000	1,679,900	589,490,000	1,610,600	25,377,000	69,300
1941	1,594,609,000	4,368,800	1,485,779,000	4,070,600	108,830,000	298,200	694,588,000	1,903,000	667,505,000	1,828,800	27,083,000	74,200
1942	1,566,815,000	4,292,600	1,499,908,000	4,109,300	116,907,000	320,300	624,207,000	1,710,200	589,110,000	1,614,000	35,097,000	96,200
1943	1,671,383,000	4,579,100	1,521,426,000	4,168,300	149,957,000	410,800	619,815,000	1,698,100	568,238,000	1,556,800	51,577,000	141,300
1944	1,878,879,000	5,133,600	1,671,263,000	4,566,300	207,616,000	567,300	733,019,000	2,002,800	632,482,000	1,728,100	100,537,000	274,700
1945	1,952,140,000	5,348,300	1,767,867,000	4,843,500	184,273,000	504,800	785,257,000	2,151,400	696,407,000	1,908,800	88,850,000	243,400
1946	1,936,510,000	5,305,000	1,786,002,000	4,893,000	150,508,000	412,000	778,525,000	2,133,000	733,704,000	2,010,000	44,821,000	123,000

Demand for and Supply of All Oils, Crude Oil, Motor Fuel, Kerosine, Fuel Oils, and Lubricants

(Source: Bureau of Mines except November and December, 1946, estimated with aid of A.P.I. Statistcal Bulletins.)

(THOUSANDS OF BARRELS)

ITEM	Year 1941	Year 1945	Year 1946	% Diff. '41-'46	% Diff. '45-'46
ALL OILS					
Domestic Production, Total	1,486,518	1,825,257	1,848,891	+ 24.4	+ 1.3
(Daily Average)	4,073	5,001	5,065	+ 24.4	+ 1.3
Crude Petroleum	1,402,228	1,711,103	1,731,889	+ 23.5	+ 1.2
(Daily Average)	3,842	4,688	4,745	+ 23.5	+ 1.2
Natural Gasoline	80,855	111,274	114,932	+ 42.1	+ 3.3
(Daily Average)	222	305	315	+ 42.1	+ 3.3
Benzol	3,435	2,880	2,070	— 39.7	—28.1
(Daily Average)	9	8	5	— 39.7	—28.1
Imports, Total	97,142	113,373	134,698	+ 38.7	+18.8
(Daily Average)	266	310	369	+ 38.7	+18.8
Crude Petroleum	50,606	74,095	87,053	+ 72.0	+17.5
(Daily Average)	139	203	238	+ 72.0	+17.5
Refined Products	46,536	39,278	47,645	+ 2.4	+21.3
(Daily Average)	127	107	131	+ 2.4	+21.3
Changes in Stocks, All Oils	—10,949	—13,510	+47,079	.....	.....
(Daily Average)	—30	—37	+129	.....	.....
Stocks, Beginning of Period	563,277	477,089	463,579	— 17.7	— 2.8
Refinable Crude	264,709	220,663	218,763	— 17.4	— 0.9
Heavy Crude in California	11,906	6,107	4,496	— 62.2	—26.4
Refined Products	280,958	245,868	235,998	— 16.0	— 4.0
Natural Gasoline	5,704	4,451	4,322	— 24.2	— 2.9
Stocks, End of Period	552,328	463,579	510,658	— 7.5	+11.2
(Days' Supply)	127	87	96	— 24.4	+10.3
Refinable Crude	247,499	218,763	224,836	— 9.2	+ 2.8
Heavy Crude in California	10,179	4,496	5,704	— 44.0	+26.9
Refined Products	290,375	235,998	273,618	— 5.8	+15.9
Natural Gasoline	4,275	4,322	6,500	+ 52.0	+50.4
Demand, Total	1,594,609	1,952,140	1,936,510	+ 21.4	— 0.8
(Daily Average)	4,369	5,348	5,305	+ 21.4	— 0.8
Exports, Total	108,830	184,273	150,508	+ 38.3	—18.3
(Daily Average)	298	505	412	+ 38.3	—18.3
Crude Petroleum, Total	33,238	32,998	42,008	+ 26.4	+27.3
(Daily Average)	91	90	115	+ 26.4	+27.3
Refined Products, Total	75,592	151,275	108,500	+ 43.5	—28.3
(Daily Average)	207	415	297	+ 43.5	—28.3
Domestic Demand, Total	1,485,779	1,767,867	1,786,002	+ 20.2	+ 1.0
(Daily Average)	4,071	4,843	4,893	+ 20.2	+ 1.0
CRUDE PETROLEUM					
Supply:					
Domestic Production, Total	1,402,228	1,711,103	1,731,889	+ 23.5	+ 1.2
(Daily Average)	3,842	4,688	4,745	+ 23.5	+ 1.2
Imports, Total	50,606	74,095	87,053	+ 72.0	+17.5
(Daily Average)	139	203	238	+ 72.0	+17.5
Change in Stocks (incl, Calif. hvy)	—18,937	—3,511	+7,281	.....	.....
(Daily Average)	—52	—10	+20	.....	.....
Stocks, Beginning of Period	276,615	226,770	223,259	— 13.4	— 1.5
Stocks, End of Period	257,678	223,259	230,540	— 16.7	+ 3.3
(Days' Supply)	69	46	46	— 33.3	.....
Supply, Total	1,471,771	1,788,709	1,811,661	+ 23.1	+ 1.3
(Daily Average)	4,032	4,901	4,963	+ 23.1	+ 1.3
Demand:					
Runs to Stills, Total	1,409,192	1,719,534	1,731,458	+ 22.9	+ 0.7
(Daily Average)	3,861	4,711	4,744	+ 22.9	+ 0.7
Domestic Crude	1,358,246	1,645,862	1,646,364	+ 21.2	.....
(Daily Average)	3,721	4,509	4,511	+ 21.2	.....
Foreign Crude	50,946	73,672	85,094	+ 67.0	+15.5
(Daily Average)	139	202	233	+ 67.0	+15.5
Exports, Total	33,238	32,998	42,008	+ 26.4	+27.3
(Daily Average)	91	90	115	+ 26.4	+27.3
Transfers to Fuel Oil Stocks	15,482	23,774	26,163	+ 69.0	+10.0
(Daily Average)	42	65	71	+ 69.0	+10.0
Distillate Fuel Oil	2,383	3,047	3,125	+ 31.1	+ 2.6
Residual Fuel Oil	13,099	20,727	23,038	+ 75.9	+11.1
Used as Fuel, and Losses	13,859	12,403	12,032	— 13.2	— 3.0
(Daily Average)	38	34	33	— 13.2	— 3.0
Demand, Total	1,471,771	1,788,709	1,811,661	+ 23.1	+ 1.3
(Daily Average)	4,032	4,901	4,963	+ 23.1	+ 1.3
DISTILLATE FUEL OIL					
Production, Total	189,177	249,224	288,445	+ 52.5	+15.7
(Daily Average)	518	683	790	+ 52.5	+15.7
Percent Yield from Crude	13.4	14.5	16.7	.....	.....
Transfers from Crude	2,513	3,047	3,125	+ 24.4	+ 2.6
(Daily Average)	7	8	8	+ 24.4	+ 2.6
Imports, Total	5,074	4,754	5,445	+ 7.3	+14.5
(Daily Average)	14	13	15	+ 7.3	+14.5
Change in Stocks	+7,015	—2,555	+22,776	.....	.....
(Daily Average)	+19	—7	+62	.....	.....
Stocks, Beginning of Period	42,911	38,333	35,778	— 16.6	— 6.7
Stocks, End of Period	49,926	35,778	58,554	+ 17.3	+63.7
(Days' Supply)	96	50	78	— 18.8	+56.0
Demand, Total	189,749	259,580	274,239	+ 44.5	+ 5.6
(Daily Average)	520	711	751	+ 44.5	+ 5.6
Exports, Total	16,925	33,827	29,495	+ 74.3	—12.8
(Daily Average)	46	93	81	+ 74.3	—12.8
Domestic Demand	172,824	225,753	244,744	+ 41.6	+ 8.4
(Daily Average)	474	618	670	+ 41.6	+ 8.4

ITEM	Year 1941	Year 1945	Year 1946	% Diff. '41-'46	% Diff. '45-'46
MOTOR FUEL					
Production, Total	701,294	799,059	776,932	+ 10.8	— 2.8
(Daily Average)	1,921	2,189	2,129	+ 10.8	— 2.8
Refinery Gasoline, Total	623,285	704,136	686,120	+ 10.1	— 2.6
(Daily Average)	1,708	1,929	1,880	+ 10.1	— 2.6
(Yield from Crude)	44.2	40.9	39.6	.....	.....
Cracked	344,013	401,789	389,229	+ 13.1	— 3.1
Straight Run	279,272	302,347	296,891	+ 6.3	— 1.8
Natural Gasoline, etc.	80,855	111,274	114,932	+ 42.1	+ 3.3
(Daily Average)	222	305	315	+ 42.1	+ 3.3
Less Sales of L.P.G.	6,281	18,383	24,929	+296.9	+35.6
Less Transfers Cycle Prods.	.....	848	1,261	.....	+48.7
Benzol	3,435	2,880	2,070	— 39.7	—28.1
Imports, Total	335	1,807	.....	.....	.....
(Daily Average)	1	5	.....	.....	.....
Change in Stocks	+7,041	+15,808	—1,593	.....	.....
(Daily Average)	+19	+43	—4	.....	.....
Stocks, Beginning of Period	83,647	77,874	93,682	+ 12.0	+20.3
Finished Gasoline	77,943	73,622	89,360	+ 14.6	+21.4
Natural Gasoline	5,704	4,252	4,322	— 24.2	+ 1.6
Stocks, End of Period	90,688	93,682	92,089	+ 1.5	— 1.7
(Days' Supply)	48	44	43	— 10.4	— 2.3
Finished Gasoline	86,413	89,360	85,589	— 1.0	— 4.2
Natural Gasoline	4,275	4,322	6,500	+ 52.0	+50.4
Demand, Total	694,588	785,257	778,525	+ 12.1	— 0.9
(Daily Average)	1,903	2,151	2,133	+ 12.1	— 0.9
Exports, Total	27,083	88,850	44,821	+ 65.5	—49.6
(Daily Average)	74	243	123	+ 65.5	—49.6
Domestic Demand	667,505	696,407	733,704	+ 9.9	+ 5.4
(Daily Average)	1,829	1,908	2,010	+ 9.9	+ 5.4
KEROSINE					
Production, Total	72,586	81,024	104,425	+ 43.9	+28.9
(Daily Average)	199	222	286	+ 43.9	+28.9
Percent Yield from Crude	5.2	4.7	6.0	.....	.....
Imports, Total	191	.....	.....	.....	.....
(Daily Average)	1	.....	.....	.....	.....
Change in Stocks	+87	—729	+6,575	.....	.....
(Daily Average)	.....	—2	+18	.....	.....
Stocks, Beginning of Period	9,512	11,150	10,421	+ 9.6	— 6.5
Stocks, End of Period	9,...	10,421	16,996	+ 77.1	+63.1
(Days' Supply)	48	47	63	+ 31.3	+34.0
Demand, Total	72,690	81,753	97,850	+ 34.6	+19.7
(Daily Average)	199	224	268	+ 34.6	+19.7
Exports, Total	3,221	6,158	8,049	+149.9	+30.7
(Daily Average)	9	17	22	+149.9	+30.7
Domestic Demand	69,469	75,595	89,801	+ 29.3	+18.8
(Daily Average)	190	207	246	+ 29.3	+18.8
LUBRICATING OIL					
Production, Total	39,539	41,867	45,912	+ 16.1	+ 9.7
(Daily Average)	108	115	126	+ 16.1	+ 9.7
Percent Yield from Crude	2.8	2.4	2.7	.....	.....
Imports, Total	.....	.....	88	.....	.....
(Daily Average)	.....	.....	.....	.....	.....
Change in Stocks	—640	—42	—23	.....	.....
(Daily Average)	—2	.....	.....	.....	.....
Stocks, Beginning of Period	8,767	7,815	7,773	— 11.3	— 0.5
Stocks, End of Period	8,127	7,773	7,750	— 4.6	— 0.3
(Days' Supply)	74	68	62	— 16.2	— 8.8
Demand, Total	40,179	41,909	46,023	+ 14.5	+ 9.8
(Daily Average)	110	115	126	+ 14.5	+ 9.8
Exports, Total	9,924	6,591	10,518	+ 6.0	+59.6
(Daily Average)	27	18	29	+ 6.0	+59.6
Domestic Demand	30,255	35,318	35,505	+ 17.4	+ 0.5
(Daily Average)	83	97	97	+ 17.4	+ 0.5
RESIDUAL FUEL OIL					
Production, Total	342,367	469,492	431,205	+ 25.9	— 8.2
(Daily Average)	959	1,286	1,181	+ 25.9	— 8.2
Percent Yield from Crude	24.3	27.3	24.9	.....	.....
Transfers from Crude	12,969	20,727	23,038	+ 77.6	+11.1
(Daily Average)	36	57	63	+ 77.6	+11.1
Imports, Total	37,369	31,557	40,342	+ 8.0	+27.8
(Daily Average)	102	86	111	+ 8.0	+27.8
Change in Stocks	—4,831	—13,225	+10,491	.....	.....
(Daily Average)	—13	—36	+29	.....	.....
Stocks, Beginning of Period	88,026	50,383	37,158	— 57.8	—26.2
Stocks, End of Period	83,195	37,158	47,649	— 42.7	+28.2
(Days' Supply)	76	25	36	— 52.6	+44.0
Demand, Total	397,536	535,001	484,094	+ 21.8	— 9.5
(Daily Average)	1,089	1,466	1,326	+ 21.8	— 9.5
Exports, Total	14,114	11,919	9,521	— 32.5	—20.1
(Daily Average)	39	33	26	— 32.5	—20.1
Domestic Demand	383,422	523,082	474,573	+ 23.8	— 9.3
(Daily Average)	1,050	1,433	1,300	+ 23.8	— 9.3

World Crude Production

Rapid expansion in Middle East and Venezuela producing rates largely responsible for world gain of 450,000 barrels daily

By WELDON B. HILL

WORLD crude oil production exceeded all expectations during 1946 by attaining a level 6 percent greater than in 1945, and indications point to a materially larger volume being produced in 1947 and subsequent years as production expands in keeping with increased refining and distribution facilities.

World production of crude oil in 1946 was 2,789,910,000 barrels, a daily average of 7,643,589 barrels. Thus, in comparison with 1945, the increase was 164,725,000 barrels annually and 451,301 barrels daily, a gain of slightly greater than 6 percent. Revised figures for 1945 showed production of 2,625,185,000 barrels for the year and 7,192,288 barrels daily.

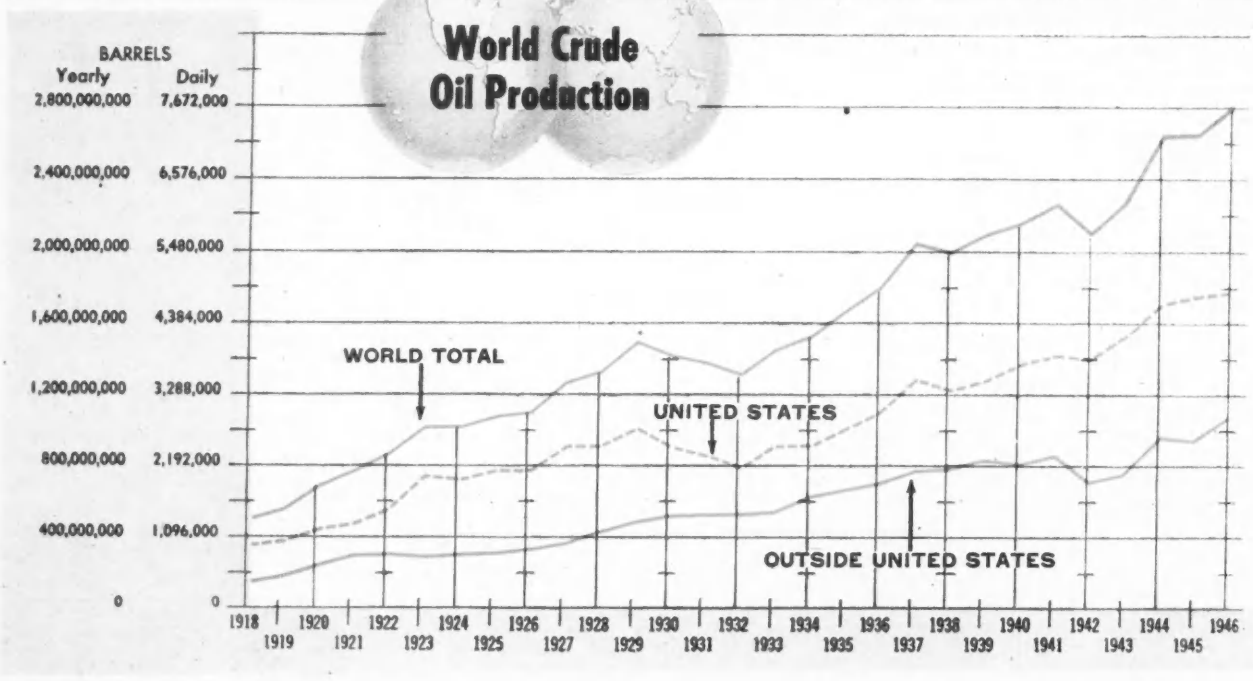
The sharp advance in global crude oil output was attained largely through production records set in the Middle East and Venezuela.

Eight Million Daily

World crude oil production in 1947 should approximate the 8-million-barrel per day figure. Indications are that there will be a minimum increase of 350,000 barrels per day over the peak of 7,643,000 barrels that was reached in 1946.

At the end of the year, the Middle East countries already were producing 50,000 barrels more and Venezuela 60,000 barrels more than their respective daily averages for 1946. These rates are apt to be enlarged before the year is over. Other countries also were producing at higher rates at the and of the year, although in smaller amounts. As explained in another article in this issue, the United States should produce 150,000 barrels more oil daily in 1947 than it did in 1946. In view of these trends, it appears that a predicted gain of 350,000 barrels per day in world crude oil production is conservative. The growth may well be greater.

Fears exist that the prospective sharp growth in world producing will create a surplus output. However, if world consumption continues expanding at its recent swift pace, there will be sufficient demand by the time Middle East pipe



(All Figures in Barrels)

YEAR	WORLD Annual Total	WORLD Daily Average	UNITED STATES Annual Total	UNITED STATES Daily Average	OUTSIDE U.S.A. Annual Total	OUTSIDE U.S.A. Daily Average
1918....	503,515,000	1,378,000	355,928,000	975,000	147,587,000	403,000
1919....	555,875,000	1,523,000	378,367,000	1,037,000	177,508,000	486,000
1920....	688,884,000	1,887,000	442,929,000	1,213,000	245,955,000	674,000
1921....	766,002,000	2,098,000	472,183,000	1,294,000	293,819,000	804,000
1922....	858,898,000	2,353,000	557,531,000	1,528,000	301,367,000	825,000
1923....	1,015,736,000	2,783,000	732,407,000	2,007,000	283,329,000	776,000
1924....	1,014,318,000	2,779,000	713,940,000	1,956,000	300,378,000	823,000
1925....	1,068,983,000	2,928,000	763,743,000	2,092,000	305,190,000	836,000
1926....	1,096,823,000	3,005,000	770,874,000	2,112,000	325,949,000	893,000
1927....	1,262,582,000	3,459,000	901,129,000	2,469,000	361,453,000	990,000
1928....	1,324,774,000	3,629,000	901,474,000	2,469,000	423,300,000	1,160,000
1929....	1,485,867,000	4,071,000	1,007,328,000	2,760,000	478,544,000	1,311,000
1930....	1,410,037,000	3,863,000	898,011,000	2,460,000	512,026,000	1,403,000
1931....	1,372,532,000	3,760,000	851,081,000	2,332,000	521,451,000	1,428,000
1932....	1,309,677,000	3,588,000	785,159,000	2,151,600	524,518,000	1,437,000
1933....	1,442,146,000	3,951,000	905,656,000	2,481,000	536,490,000	1,470,000
1934....	1,522,281,000	4,170,000	908,065,000	2,488,000	614,216,000	1,682,000
1935....	1,654,488,000	4,532,000	996,596,000	2,730,000	657,892,000	1,802,000
1936....	1,791,540,000	4,908,000	1,099,687,000	3,013,000	691,853,000	1,895,000
1937....	2,039,231,000	5,587,000	1,279,160,000	3,505,000	760,071,000	2,082,000
1938....	1,988,941,000	5,446,000	1,214,355,000	3,327,000	773,686,000	2,119,000
1939....	2,086,160,000	5,715,500	1,264,962,000	3,465,600	821,198,000	2,249,900
1940....	2,149,821,000	5,873,800	1,353,214,000	3,697,300	796,607,000	2,176,500
1941....	2,222,941,000	6,090,200	1,402,228,000	3,841,700	820,713,000	2,248,500
1942....	2,079,866,000	5,698,300	1,386,645,000	3,799,100	692,221,000	1,899,200
1943....	2,231,423,000	6,113,500	1,505,613,000	4,125,000	725,810,000	1,988,500
1944....	2,614,345,000	7,143,000	1,677,904,000	4,584,400	936,441,000	2,558,600
1945....	2,625,185,000	7,192,300	1,711,103,000	4,688,000	914,082,000	2,504,300
1946....	2,789,910,000	7,643,600	1,731,889,000	4,744,900	1,058,021,000	2,898,700

Showing Very Sharp Rise

Prospects for additional growth in Middle East and Venezuela producing rates give assurance of new world peaks in future

Staff Writer

lines are completed to absorb the increase.

Output Higher

Although production in the United States also climbed to a new peak, the output of the rest of the world was up much more sharply. While United States' flow in 1946 was boosted 20,786,000 barrels annually and 56,948 barrels daily over 1945, or slightly more than one percent, the remaining countries' output advanced 144,939,000 barrels during the year and 394,353 barrels daily, or almost 16 percent.

Twenty-one of the world producing areas produced more oil in 1946 than in 1945. The region experiencing the greatest boost was the Middle East which produced an average of 703,836 barrels daily, 189,118 barrels or one-third more than in 1945.

First actual production in Kuwait began along in June and for the remainder of the year this country produced 6,900,000 barrels or a daily average of 18,904 barrels for the end of 1946 was 45,000 barrels daily with an upward trend evident.

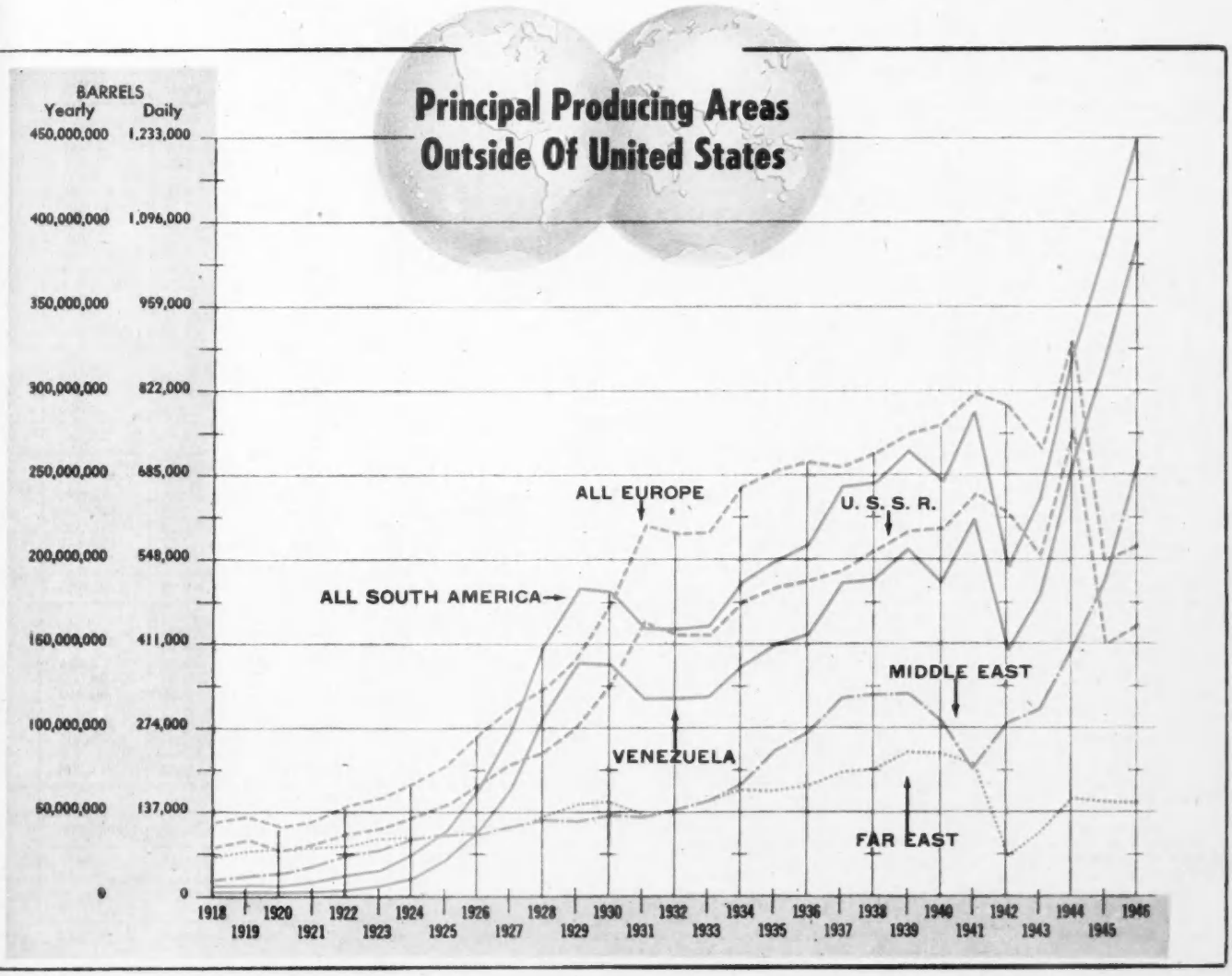
Yearly production in Saudi Arabia almost tripled during 1946 as compared with 1945. The output was 60,500,000 barrels as against 21,311,000 barrels in 1945, an average of 165,754 barrels daily as against 58,386 barrels daily in 1945, or almost 184 percent. Production in Iran was up 15 percent while the output in Iraq and on Bahrein Island each climbed about 10 percent.

Middle East Outlook

The Middle East area is scheduled to produce another record volume in 1947. Daily average production of these countries at the beginning of the year was roughly 754,000 barrels, 50,000 barrels more than their average for 1946, a rate which should be maintained in 1947.

Additional sharp growth in Middle East production is due to occur in forthcoming years, as refining and transportation facilities are enlarged. Before another five years pass, Middle East production may be twice its present volume, or roughly 1,600,000 barrels daily. Under construction now is a 90,000-barrel capacity pipe line in Iraq, scheduled for completion in 1949. Proposed plans, as announced recently are likely to result in an additional increase of 770,000 barrels per day or more. With many of these projects in the formative stage, it is not yet possible to determine with accuracy just when such new facilities can be placed in operation, but they probably will be ready from three to five years hence.

South America's oil flow in 1946 was up 15.4 percent, all of the increase being accounted for by the growing output in Venezuela. Production in Venezuela rose



64,842,000 barrels in the year, an increase of 177,650 barrels daily, or slightly more than 20 percent. This trend is expected to be maintained in 1947. However, output in all other Latin American countries registered slight decreases.

In Europe, most of the countries showed an increase over 1945's revised estimates. This was due to the fast reconstruction of the fields in order to meet normal demands and to relieve the Allied Nations from drawing from their own sources as much as possible.

Russian Question Mark

Russia's production, still an item for speculation outside of Moscow, was estimated at 160 million barrels during 1946. This was an increase of about 7½ percent over the estimated 149 million barrels in 1945. The latter figure was revised downward sharply from first 1945 estimates, as more information became available. It is possible that Russia's estimated production during the whole war period eventually will be revised downward.

Estimated production in France rose sharply to 100 million barrels during the year. This was based on the rapid rehabilitation of the Pechelbronn area and a slight increase in the St. Marcet field in Southern France. Production in Austria, Germany and Hungary also showed a moderate climb and probably will continue the trend in 1947.

Egypt accounts for almost all of the crude oil flow in Africa but there the estimated output was down about 2 percent. Egypt's production was 9,200,000 barrels in 1946 and 9,406,000 barrels the year before.

In the Far East where oil field activity in the Netherlands East Indies has been hampered by continued fighting, the output remained steady at 57,150,000 barrels annually. The only gains registered were in India, China and Japan. However, unless further delayed new installation of refinery and pipe line facilities and production of many shut-in wells will boost the 1947 flow in the Indies.

Prewar and Recent Trends in World Crude Oil Production, by Countries, and Cumulative Production Through 1946

(Production figures are from U. S. Bureau of Mines except those for 1945 and 1946, which are from private sources or estimated by THE OIL WEEKLY)

Continent and Country	ANNUAL PRODUCTION (Thousands of Barrels)			DAILY AVERAGE PRODUCTION (Actual Barrels)				YEAR'S PRODUCTION AS PERCENT OF WORLD			CUMULATIVE PRODUCTION TO JANUARY 1, 1947 (Thousands of Bbls.)	
	1938	1945	1946	1938	1945	1946	% Diff. '45-'46	1938	1945	1946	Total	As % of World
NORTH AMERICA—												
Canada	6,966	8,550	7,250	19,085	23,425	19,863	— 15.2	0.35	0.33	0.26	120,882	0.23
Mexico	38,506	43,547	49,212	105,496	119,307	134,827	+ 13.0	1.94	1.66	1.76	2,234,186	4.30
Trinidad	17,737	21,093	20,000	48,594	57,789	54,795	— 5.2	0.89	0.80	0.72	330,983	0.64
United States	1,214,355	1,711,103	1,731,889	3,327,000	4,687,953	4,744,901	+ 1.2	61.08	65.18	62.08	33,221,800	63.94
Other North America	78	172	175	214	471	480	+ 1.9	0.01	0.01	.....	1,472	0.00
Total North America	1,277,642	1,784,465	1,808,526	3,500,389	4,888,945	4,954,866	+ 1.3	64.27	67.98	64.82	35,909,323	69.11
SOUTH AMERICA—												
Argentina	17,076	25,463	22,500	46,784	69,762	61,644	— 11.6	0.86	0.97	0.81	371,126	0.71
Bolivia	226	406	375	619	1,112	1,027	— 7.6	0.01	0.02	0.01	3,488	0.01
Colombia	21,582	22,904	22,250	59,129	62,751	60,959	— 2.9	1.09	0.87	0.80	393,234	0.76
Ecuador	2,246	2,664	2,400	6,153	7,299	6,575	— 9.9	0.11	0.10	0.09	39,001	0.08
Peru	15,839	13,747	12,500	43,395	37,663	34,246	— 9.1	0.80	0.52	0.45	344,886	0.66
Venezuela	188,174	323,358	388,200	515,545	885,912	1,063,562	+ 20.1	9.46	12.32	13.91	3,596,643	6.93
Brazil	.....	79	70	.....	216	192	— 11.1	.....	.....	.....	345	0.00
Total South America	245,143	388,621	448,295	671,625	1,064,715	1,228,205	+ 15.4	12.33	14.80	16.07	4,748,723	9.14
EUROPE—												
Albania	752	750	725	2,060	2,055	1,986	— 3.4	0.04	0.03	0.03	9,923	0.02
Czechoslovakia	130	175	188	356	479	515	+ 7.5	0.01	0.01	0.01	3,803	0.01
England	.....	532	525	.....	1,458	1,438	— 1.4	.....	0.02	0.02	3,571	0.01
France	513	29	100	1,406	79	274	+ 246.8	0.02	.....	.....	13,170	0.02
Germany	3,861	3,771	4,583	10,578	10,331	12,556	+ 21.5	0.19	0.14	0.16	87,159	0.17
Austria	383	3,067	4,500	1,049	8,403	12,329	+ 46.7	0.02	0.12	0.16	40,056	0.08
Hungary	288	5,019	5,220	789	13,751	14,301	+ 4.0	0.01	0.19	0.19	34,135	0.07
Italy	101	75	75	277	206	206	.....	0.01	.....	.....	3,291	0.01
Poland	3,763	770	860	10,310	2,110	2,356	+ 11.7	0.19	0.03	0.03	277,644	0.53
Roumania	48,487	34,475	32,450	132,841	94,452	88,904	— 5.9	2.44	1.31	1.16	1,130,053	2.17
U.S.S.R. (Russia)	204,956	148,953	160,000	561,523	408,090	438,356	+ 7.4	10.31	5.68	5.74	5,655,712	10.88
Other Europe	9	10	568	25	27	1,557	+5666.7	0.00	.....	0.02	654	0.00
Total Europe	263,243	197,626	209,794	721,214	541,441	574,778	+ 6.2	13.24	7.53	7.52	7,259,171	13.97
AFRICA—												
Egypt	1,581	9,406	9,200	4,331	25,770	25,205	— 2.2	0.08	0.36	0.33	98,610	0.19
Algeria	.....	23	20	.....	63	55	— 12.7	.....	.....	.....	186	0.00
Other Africa	27	2	5	74	6	14	+ 133.3	0.00	.....	.....	227	0.00
Total Africa	1,608	9,431	9,225	4,405	25,839	25,274	— 2.2	0.08	0.36	0.33	99,023	0.19
ASIA—												
Middle East:												
Bahrein Island	8,298	7,309	8,000	22,734	20,025	21,918	+ 9.5	0.42	0.28	0.29	78,579	0.15
Iran (Persia)	78,372	127,407	146,500	214,748	349,060	401,370	+ 15.0	3.94	4.85	5.25	1,589,846	3.06
Iraq	32,643	31,845	35,000	89,433	87,247	95,890	+ 9.9	1.64	1.21	1.25	345,355	0.67
Saudi Arabia	495	21,311	60,500	1,356	58,386	165,754	+ 183.9	0.03	0.81	2.17	112,902	0.22
Kuwait	.....	.....	6,900	.....	.....	18,904	.....	.....	.....	0.25	6,900	0.01
Total Near East	119,808	187,872	256,900	328,241	514,718	703,836	+ 36.7	6.03	7.15	9.21	2,133,582	4.11
Far East:												
Burma	7,538	1,000	500	20,652	2,740	1,370	— 50.0	0.38	0.04	0.02	{ 331,592	0.64
India, British	2,488	2,150	2,500	6,816	5,890	6,849	+ 16.3	0.12	0.08	0.09		
China	.....	500	600	.....	1,370	1,644	+ 20.0	.....	0.02	0.02	2,494	0.00
Japan (incl. Taiwan)	2,511	1,500	1,550	6,879	4,110	4,247	+ 3.3	0.13	0.06	0.05	98,059	0.19
Sakhalin	3,821	6,000	6,000	10,469	16,438	16,438	.....	0.19	0.23	0.22	66,240	0.13
Borneo, British (Sarawak & Brunei)	6,913	6,000	6,000	18,940	16,438	16,438	.....	0.35	0.23	0.22	133,532	0.25
Netherlands India	57,318	40,000	40,000	157,036	109,589	109,589	.....	2.88	1.52	1.43	1,179,391	2.27
Total Far East	80,589	57,150	57,150	220,792	156,575	156,575	.....	4.05	2.18	2.05	1,811,308	3.48
Other Asia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Asia	200,397	245,022	314,050	549,033	671,293	860,411	+ 28.2	10.08	9.33	11.26	3,944,890	7.59
AUSTRALIA-NEW ZEALAND	4	5	5	11	14	14	.....	0.00	.....	.....	50	0.00
World Undistributed	4	15	15	11	41	41	.....	0.00	.....	.....	1,132	0.00
Total World	1,988,241	2,625,185	2,789,910	5,466,688	7,192,288	7,643,589	+ 6.3	100.00	100.00	100.00	51,962,312	100.00

World Crude Oil Production, by Countries, by Years

(Complete production history of world, in thousands of barrels of 42 U. S. Gallons. *Sources: Mineral Resources and Minerals Yearbook*, except as otherwise indicated)

	NORTH AMERICA						SOUTH AMERICA							
YEAR	Canada	Mexico	Trinidad	United States	Other North America	Total North America	Argentina	Bolivia	Colombia	Ecuador	Peru	Venezuela	Brazil	Total South America
1857														
1858														
1859				2		2								
1860				500		500								
1861				2,114		2,114								
1862	12			3,057		3,069								
1863	83			2,611		2,694								
1864	90			2,116		2,206								
1865	110			2,498		2,608								
1866	175			3,598		3,773								
1867	190			3,347		3,537								
1868	200			3,646		3,846								
1869	220			4,215		4,435								
1870	250			5,261		5,511								
1871	270			5,205		5,475								
1872	308			6,293		6,601								
1873	365			9,894		10,259								
1874	169			10,927		11,096								
1875	220			8,788		9,008								
1876	312			9,133		9,445								
1877	312			13,350		13,662								
1878	312			15,397		15,709								
1879	575			19,914		20,489								
1880	350			26,286		26,636								
1881	275			27,661		27,936								
1882	275			30,350		30,625								
1883	250			23,450		23,700								
1884	250			24,218		24,468								
1885	250			21,859		22,109								
1886	584			28,065		28,649								
1887	526			28,283		28,809								
1888	695			27,612		28,307								
1889	705			35,164		35,869								
1890	795			45,824		46,619								
1891	755			54,293		55,048								
1892	780			50,515		51,295								
1893	798			48,431		49,229								
1894	829			49,344		50,173								
1895	726			52,892		53,618								
1896	727			60,960		61,687					47			47
1897	710			60,476		61,186					71			71
1898	758			55,364		56,122					71			71
1899	808			57,071		57,879					89			89
1900	913			63,621		64,534					274			274
1901	757	10		69,389		70,156					275			275
1902	531	40		88,767		89,338					287			287
1903	487	75		100,461		101,023					278			278
1904	553	126		117,081		117,760					290			290
1905	634	251		134,717		135,602					373			373
1906	569	502		126,494		127,565					531			531
1907	789	1,005		166,095		167,889	D				751			751
1908	528	3,933	D	178,527		182,988	12				945			957
1909	421	2,714	57	183,171		186,363	18				1,411			1,429
1910	316	3,634	143	209,557		213,650	20				1,258			1,278
1911	291	12,553	285	220,449		233,578	13				1,465			1,478
1912	243	16,558	437	222,935		240,173	47				1,752			1,799
1913	228	25,696	504	248,446		274,874	131				2,071			2,202
1914	215	26,235	644	265,763		292,857	276				1,837			2,113
1915	215	32,911	750	281,104		314,980	513				2,579			3,092
1916	198	40,546	929	300,767		342,440	867				2,593			3,460
1917	214	55,293	1,602	335,316		392,425	1,218			57	2,577	120		3,972
1918	305	63,828	2,082	355,928		422,143	1,353			E60	2,527	333		4,273
1919	241	87,073	1,841	378,367		467,522	1,331			E60	2,628	425		4,444
1920	196	157,069	2,083	442,929		602,277	1,651			E60	2,817	457		4,985
1921	188	193,398	2,354	472,183		668,123	2,036		67	E60	3,699	1,433		7,295
1922	179	182,278	2,445	557,531		742,433	2,866		323	E60	5,314	2,201		10,764
1923	170	149,585	3,051	732,407		885,213	3,400		425	87	5,699	4,201		13,812
1924	161	139,678	4,057	713,940		857,836	4,639		445	E100	8,379	9,042		22,605
1925	332	115,515	4,387	763,743		883,977	6,336		1,007	160	9,232	19,687		36,422
1926	364	90,421	4,971	770,874		866,630	7,851		6,444	214	10,762	36,911		62,182
1927	477	64,121	5,380	901,129		971,107	8,630		15,014	537	10,127	63,134		97,442
1928	624	50,151	7,684	901,474		959,933	9,070		19,897	1,084	12,006	105,749		147,806
1929	1,117	44,688	8,716	1,007,323		1,061,844	9,391	D	20,385	1,381	13,422	137,472		182,051
1930	1,522	39,530	9,419	898,011		948,482	9,002	56	20,346	1,553	12,449	136,669		180,075
1931	1,543	33,039	9,744	851,081		895,407	11,709	25	18,237	1,762	10,089	116,613		158,435
1932	1,044	32,805	10,126	785,159		829,134	13,139	44	16,414	1,597	9,899	116,541		157,634
1933	1,145	34,001	9,561	905,656	23	950,386	13,691	112	13,158	1,620	13,257	117,720		159,558
1934	1,417	38,172	10,894	908,065	28	958,576	14,024	159	17,341	1,637	16,314	136,103		185,578
1935	1,447	40,241	11,671	996,596	47	1,050,002	14,297	164	17,598	1,732	17,067	148,254		199,112
1936	1,500	41,028	13,237	1,099,687	62	1,155,514	15,458	105	18,756	1,942	17,593	154,794		208,648
1937	2,944	46,907	15,503	1,279,160	33	1,344,547	16,355	122	20,599	2,161	17,457	186,230		242,924
1938	6,966	38,506	17,737	1,214,355	78	1,277,642	17,076	226	21,582	2,246	15,839	188,174		245,143
1939	7,838	42,898	19,270	1,264,962	112	1,335,080	18,613	215	23,857	2,313	13,508	206,470		264,976
1940	8,591	44,036	22,227	1,353,214	142	1,428,210	20,609	288	25,593	2,349	12,126	185,570	2	246,537
1941	10,134	42,196	20,506	1,402,228	150	1,475,214	21,873	235	24,553	1,557	11,935	228,430	3	288,586
1942	10,365	34,815	22,069	1,386,645	150	1,454,044	23,704	308	10,487	2,278	13,629	147,675	31	F 198,112
1943	10,052	35,163	21,385	1,505,613	150	1,572,363	27,714	334	13,261	2,378	14,654	177,631	80	236,052
1944	10,099	38,203	22,139	1,677,904	150	1,748,495	24,230	314	22,291	2,892	14,386	257,046	80	321,239
1945J	8,550	43,547	21,093	1,711,103	172	1,784,465	25,463	406	22,904	2,664	13,747	323,358	79	388,621
1946J	7,250	49,212	20,000	1,731,889	175	1,808,526	22,500	375	22,250	2,400	12,500	388,200	70	448,295
Total	120,882	2,234,186	330,983	33,221,800	1,472	35,909,323	371,126	3,488	393,234	39,001	344,886	3,596,643	345	4,748,723

A Separation of Burma and India prior to 1935 not available from U. S. Bureau of Mines data here used. Data by L. Dudley Stamp in "Petroleum Development and Technology, 1933," and in A.I.M.E. "Transactions" indicate cumulatives through 1934 as follows, Burma 184,528, India 20,756. B Includes fields in Russian Asia other than Sakhalin. C Exclusive of U.S.S.R. fields in Asia, other than Sakhalin, which are included with U.S.S.R. in Europe. D Less than 1000 barrels. E Approximate production. F No more data available. G Year Ended September 30. H Beginning of production in Brunei. I France's earlier production credited to Germany. J 1945 and 1946 estimated by The Oil Weekly. K Represents China only prior to 1946 and for 1946 includes Kuwait 6,900 and China 600.

World Crude Oil Production, by Countries, by Years — (Continued)

(Complete production history of world, in thousands of barrels of 42 U. S. Gallons. *Sources: Mineral Resources and Minerals Yearbook*, except as otherwise indicated)

	EUROPE													AFRICA			
YEAR	Albania	Czechoslovakia	United Kingdom	France	Germany	Austria	Hungary	Italy	Poland	Roumania	[B]U.S.S.R. (Russia)	Other Europe	[E]Total Europe	Egypt	Algeria	Other Africa	Total Africa
1857										2			2				
1858										4			4				
1859										4			4				
1860								[D]		9			9				
1861								[D]		17			17				
1862								[D]		23			23				
1863								[D]		28	41		69				
1864								[D]		33	65		98				
1865								2		39	67		108				
1866								1		42	83		126				
1867								1		51	120		172				
1868								[D]		56	88		144				
1869								[D]		59	202		261				
1870								[D]		84	204		288				
1871								[D]		90	165		255				
1872								[D]		91	185		276				
1873								[D]		104	475		579				
1874								1	150	103	583		837				
1875								1	158	108	697		964				
1876								3	164	111	1,321		1,599				
1877								3	170	108	1,801		2,082				
1878								4	176	109	2,401		2,690				
1879								3	215	110	2,761		3,089				
1880					9			2	229	115	3,001		3,356				
1881					29			1	287	122	3,601		4,040				
1882					58			2	330	136	4,538		5,064				
1883					27			2	365	139	6,002		6,535				
1884					46			3	408	211	10,805		11,473				
1885					41			2	465	193	13,925		14,626				
1886					74			2	306	168	18,006		18,556				
1887					74			1	344	182	18,368		18,969				
1888					85			1	467	219	23,049		23,821				
1889					68			1	515	298	24,609		25,491				
1890					108			3	659	383	28,691		29,844				
1891					109			8	631	488	34,573		35,809				
1892					101			18	646	593	35,775		37,133				
1893					100			19	693	535	40,457		41,804				
1894					123			21	949	508	36,375		37,976				
1895					121			26	1,453	576	46,140		48,316				
1896					145			18	2,444	543	47,221		50,371				
1897					166			14	2,226	571	54,399		57,376				
1898					184			15	2,376	776	61,610		64,961				
1899					192			16	2,314	1,426	65,955		69,903				
1900					356			12	2,347	1,629	75,780		80,126				
1901					314			16	3,251	1,678	85,168		90,427				
1902					354			19	4,142	2,060	80,540		87,115				
1903					446			18	5,235	2,763	75,591		84,053				
1904					637			26	5,947	3,599	78,537		88,746				
1905					561			44	5,766	4,421	54,960		65,752				
1906					579			54	5,468	6,378	58,897		71,376				
1907					757			60	8,456	8,118	61,851		79,242				
1908					1,009			51	12,612	8,252	62,187		84,111				
1909					1,019			42	14,933	9,327	65,970		91,291				
1910					1,032			51	12,673	9,724	70,337		93,817				
1911					1,017			75	10,519	11,108	66,184		88,903	21			21
1912					1,031			54	8,535	12,976	68,019		90,615	214			214
1913					857			47	7,818	13,555	62,834		85,111	98			98
1914					781			40	6,436	12,827	67,020		87,104	753	1		754
1915					703			44	5,352	12,030	68,548		86,677	212	4		216
1916					656			51	6,587	8,945	65,817		82,056	404	8		412
1917				[I]	642			41	6,228	3,731	63,072		73,704	943	9		952
1918				363	270			35	6,032	8,730	27,168		42,598	1,935	7		1,942
1919		48	2	334	265			35	6,096	6,618	31,752		45,150	1,517	5		1,522
1920		69	3	356	246			35	5,607	7,435	25,430		39,181	1,042	4		1,046
1921		94	3	389	274			32	5,167	8,368	28,968		43,295	1,255	3		1,258
1922		120	1	496	319			31	5,227	9,843	35,692		51,729	1,188	9		1,197
1923		74	1	494	346			34	5,402	10,867	39,147		56,365	1,054	9		1,063
1924		76	2	497	406			39	5,657	13,369	45,355		65,401	1,122	11		1,133
1925		158	3	459	541			61	5,960	16,650	52,448		76,280	1,226	12		1,238
1926		150	2	478	653			41	5,844	23,314	64,311		94,793	1,188	9		1,197
1927		112	2	504	663			47	5,342	26,368	77,018		110,056	1,267	8		1,275
1928		94	1	512	630			46	5,492	30,773	[G]84,745		122,293	1,842	8		1,850
1929		93		535	704			45	4,988	34,758	[G]99,507		140,630	1,868	20		1,888
1930		157	[D]	523	1,182			59	4,904	41,624	[G]125,555		174,004	1,996	16		2,012
1931		134	[F]	520	1,606			124	4,662	49,127	162,842		219,015	2,038	[F]		2,038
1932		126	[F]	530	1,608			208	4,116	53,815	154,367		214,770	1,895	[F]		1,895
1933	11	122	[F]	562	1,665			204	4,072	54,020	154,840		215,496	1,663	[F]		1,663
1934	10	178	[F]	557	2,187			151	3,913	62,063	174,318		243,377	1,546	[F]		1,546
1935	41	133	[F]	541	2,996	44		119	3,812	61,310	182,386	2	251,384	1,301	[F]	4	1,305
1936	273	127	[F]	503	3,115	50		123	3,789	63,659	186,206	1	257,846	1,278	[F]	4	1,282
1937	619	123	[F]	502	3,176	221	16	110	3,716	52,452	193,241	4	254,180	1,196	[F]	22	1,218
1938	752	130	[F]	513	3,861	383	288	101	3,763	48,487	204,956	9	263,243	1,581	[F]	27	1,608
1939	934	120		500	4,487	1,240	1,103	91	3,898	45,648	216,866	10	274,897	4,666	[F]	27	4,693
1940	1,497	163	124	496	7,371	2,808	1,881	85	3,891	43,168	218,600	10	280,094	6,505	[F]	27	6,532
1941	1,381	183	223	414	6,313	4,263	3,178	95	3,319	40,517	238,150	10	298,046	8,546	[F]	27	8,573
1942	1,450	271	605	463	5,208	5,920	5,013	101	3,400	42,094	227,470	10	292,005	8,275	[F]	27	8,302
1943	715	200	839	500	6,500	7,800	6,313	75	3,500	39,182	200,750	10	266,384	8,953	[F]	25	8,978
1944	765	185	703	500	7,600	9,760	6,104	75	3,000	26,191	275,000	10	329,893	9,416	[F]	30	9,446
1945[J]	750	175	532	29	3,771	3,067	5,019	75	770	34,475	148,953	10	197,626	9,406	23	2	9,431
1946[J]	725	188	525	100	4,583	4,500	5,220	75	860	32,450	160,000	568	209,794	9,200	20	5	9,225
Total	9,923	3,803	3,571	13,170	87,159	40,056	34,135	3,291	277,644	1,130,053	5,655,712	654	7,259,171	98,610	186	227	99,023

[A] Separation of Burma and India prior to 1935 not available from U. S. Bureau of Mines data here used. Data by L. Dudley Stamp in "Petroleum Development and Technology, 1933," and in A.I.M.E. "Transactions" indicate cumulatives through 1934 as follows, Burma 184,528, India 20,756. [B] Includes fields in Russian Asia other than Sakhalin. [C] Exclusive of U.S.S.R. fields in Asia, other than Sakhalin, which are included with U.S.S.R. in Europe. [D] Less than 1000 barrels. [E] Approximate production. [F] No more data available. [G] Year Ended September 30. [H] Beginning of production in Brunei. [I] France's earlier production credited to Germany. [J] 1945 and 1946 estimated by The Oil Weekly. [K] Represents China only prior to 1946 and for 1946 includes Kuwait 6,900 and China 600.

World Crude Oil Production, by Countries, by Years —(Continued)

(Complete production history of world, in thousands of barrels of 42 U. S. Gallons. *Sources: Mineral Resources and Minerals Yearbook*, except as otherwise indicated)

YEAR	ASIA													Australia-New Zeal.	Rest of World	World Total	Percent Pro. by U.S.
	Bahrein Island	[A]Burma	India, British	Iran (Persia)	Iraq	Japan (Incl. Taiwan)	Netherland India	Sakhalin	Br. Borneo (Sarawak & Brunei)	Saudi Arabia	[K] Other Asia	[C]Total Asia					
1857																2	...
1858																4	...
1859																6	31
1860																500	98
1861																2,131	99
1862																3,092	99
1863																2,763	94
1864																2,304	92
1865																2,716	92
1866																3,899	92
1867																3,709	90
1868																3,990	91
1869																4,696	90
1870																5,799	91
1871																5,730	91
1872																6,877	92
1873																10,838	91
1874																11,933	92
1875						5						5				9,977	88
1876						7						7				11,051	83
1877						10						10				15,754	85
1878						18						18				18,417	84
1879						23						23				23,601	84
1880						26						26				30,018	88
1881						17						17				31,993	86
1882						15						15				35,704	85
1883						20						20				30,255	78
1884						28						28				35,969	67
1885						30						30				34,765	59
1886						38						38				47,243	59
1887						29						29				47,807	59
1888						37						37				52,165	53
1889			94			53						147				61,507	57
1890			118			52						170				76,633	60
1891			190			53						243				91,100	60
1892			242			69						311				88,739	57
1893			299			106	600					1,005				92,038	53
1894			327			173	688					1,188				89,337	55
1895			372			170	1,216					1,758				103,692	51
1896			430			237	1,427					2,094				114,199	53
1897			546			262	2,552					3,360				121,993	50
1898			542			319	2,964					3,825				124,979	44
1899			941			539	1,796					3,276				131,147	44
1900			1,079			871	2,253					4,203				149,137	43
1901			1,431			1,117	4,014					6,562		20		167,440	41
1902			1,617			996	2,430					5,043		26		181,809	40
1903			2,510			1,209	5,770					9,489		36		194,879	52
1904			3,385			1,219	6,508					11,112		40		217,948	54
1905			4,137			1,347	7,850					13,334		30		215,091	63
1906			4,016			1,564	8,181					13,761		30		213,263	59
1907			4,344			1,718	9,983					16,045		30		263,957	63
1908			5,047			1,871	10,283					17,201		30		285,287	63
1909			6,677			1,887	11,042					19,606		20		298,709	61
1910			6,138			1,829	11,031					18,998		20		327,763	64
1911			6,451			1,737	12,173					20,361		20		344,361	64
1912			7,117			1,659	10,846					19,622		20		352,443	63
1913			7,930	1,857		1,940	11,172		141			23,040		20		385,345	64
1914			7,410	2,910		2,636	11,422		318			24,696		20		407,544	65
1915			8,202	3,616		2,928	11,920		392			27,058		10		432,033	65
1916			8,491	4,477		2,963	12,547		629			29,107		25		457,500	66
1917			8,079	7,147		2,861	13,180		542			31,809		29		502,891	67
1918			8,188	8,623		2,441	12,778		504			32,534		25		503,515	71
1919			8,736	10,139		2,238	15,508		596			37,217		20		555,875	68
1920			8,375	12,230		2,221	17,529		1,020			41,375		20		688,884	64
1921			8,734	16,673		2,233	16,958	2	1,411			46,011		20		766,002	62
1922			8,529	22,247		2,055	17,066	7	2,849			52,753		22		858,898	65
1923			8,406	25,230		1,804	19,870	9	3,940			59,259		24		1,015,736	72
1924			8,416	32,373		1,814	20,473	80	4,163			67,319		24		1,014,318	70
1925			8,274	35,038		1,915	21,422	87	4,257			70,993		23		1,068,933	71
1926			8,011	35,842		1,785	21,243	181	4,942			72,004		17		1,096,823	70
1927			8,032	39,688	338	1,789	27,459	440	4,943			82,689		13		1,262,582	71
1928			8,741	43,461	713	1,944	32,118	677	[B]5,223			92,877		15		1,324,774	68
1929			8,747	42,145	798	2,023	39,279	[G]1,134	5,290			99,416		38		1,485,867	68
1930			8,292	45,828	913	1,950	41,729	[G]1,805	4,907			105,424		40		1,410,037	64
1931			8,200	44,376	830	2,050	35,539	2,734	3,854			97,583		54		1,372,532	62
1932			8,817	49,471	836	1,630	39,001	2,631	3,796			106,182		62		1,309,677	60
1933	31		8,743	54,392	917	1,455	42,606	2,338	4,490			114,972		71		1,442,146	63
1934	285		10,503	57,851	7,689	1,834	46,925	2,881	5,140			133,108		96		1,522,281	60
1935	1,265	7,181	2,038	57,273	27,408	2,249	47,171	2,545	5,546			152,676		5	4	1,654,488	60
1936	4,645	7,588	1,978	62,718	30,406	2,440	50,025	3,212	5,209	20		168,241		5	4	1,791,540	61
1937	7,762	7,848	2,162	77,804	31,836	2,488	56,724	3,656	6,009	65		196,354		4	4	2,039,231	63
1938	8,298	7,538	2,488	78,372	32,643	2,511	57,318	[E]3,821	6,913	495		200,397		4	4	1,988,041	61
1939	7,589	7,873	2,327	78,151	30,791	2,654	62,087	4,000	7,097	3,934	4	206,507		3	4	2,086,160	6.06
1940	7,074	7,731	2,302	66,317	24,225	2,639	62,011	4,000	7,047	5,075	10	188,431		3	14	2,149,821	62.9
1941	6,794	7,762	2,899	50,777	12,650	2,659	53,704	4,000	6,864	4,310	86	152,505		3	14	2,222,941	63.1
1942	6,241	2,500	2,792	72,256	19,726	3,000	9,000	4,000	3,000	4,530	340	127,385		3	15	2,079,866	66.7
1943	6,572	1,000	2,279	74,612	24,848	3,500	20,000	5,000	4,500	4,868	447	147,626		5	15	2,231,423	67.5
1944	6,714	750	2,500	102,045	30,943	3,000	40,000	5,000	6,000	7,794	507	205,253		5	14	2,614,345	64.2
1945[J]	7,309	1,000	2,150	127,407	31,845	1,500	40,000	6,000	6,000	21,311	500	245,022		5	15	2,625,185	65.2
1946[J]	8,000	500	2,500	146,500	35,000	1,550	40,000	6,000	6,000	60,500	7,500	314,050		5	15	2,789,910	62.1
Total	78,579	331,592		1,589,846	345,355	98,059	1,179,391	66,240	133,532	112,902	9,394	3,944,890		50	1,132	51,962,312	63.9

[A] Separation of Burma and India prior to 1935 not available from U. S. Bureau of Mines data here used. Data by L. Dudley Stamp in "Petroleum Development and Technology, 1933," and in A.I.M.E. "Transactions" indicate cumulatives through 1934 as follows, Burma 184,528, India 20,756. [B] Includes fields in Russian Asia other than Sakhalin. [C] Exclusive of U.S.S.R. fields in Asia, other than Sakhalin, which are included with U.S.S.R. in Europe. [D] Less than 1000 barrels. [E] Approximate production. [F] No more data available. [G] Year Ended September 30. [H] Beginning of production in Brunei. [I] France's earlier production credited to Germany. [J] 1945 and 1946 estimated by The Oil Weekly. [K] Represents China only prior to 1946 and for 1946 includes Kuwait 6,900 and China 600.

Cessation of Warfare In United States

Nation's output sets new high despite smaller demand and larger imports

CONTRARY to expectations, and despite the retarding influence of both smaller demand and larger imports, the United States produced a record volume of crude oil during 1946. This constituted the fourth consecutive year in which this nation has registered a new high in production, and prospects are that 1947 will see an even greater quantity produced.

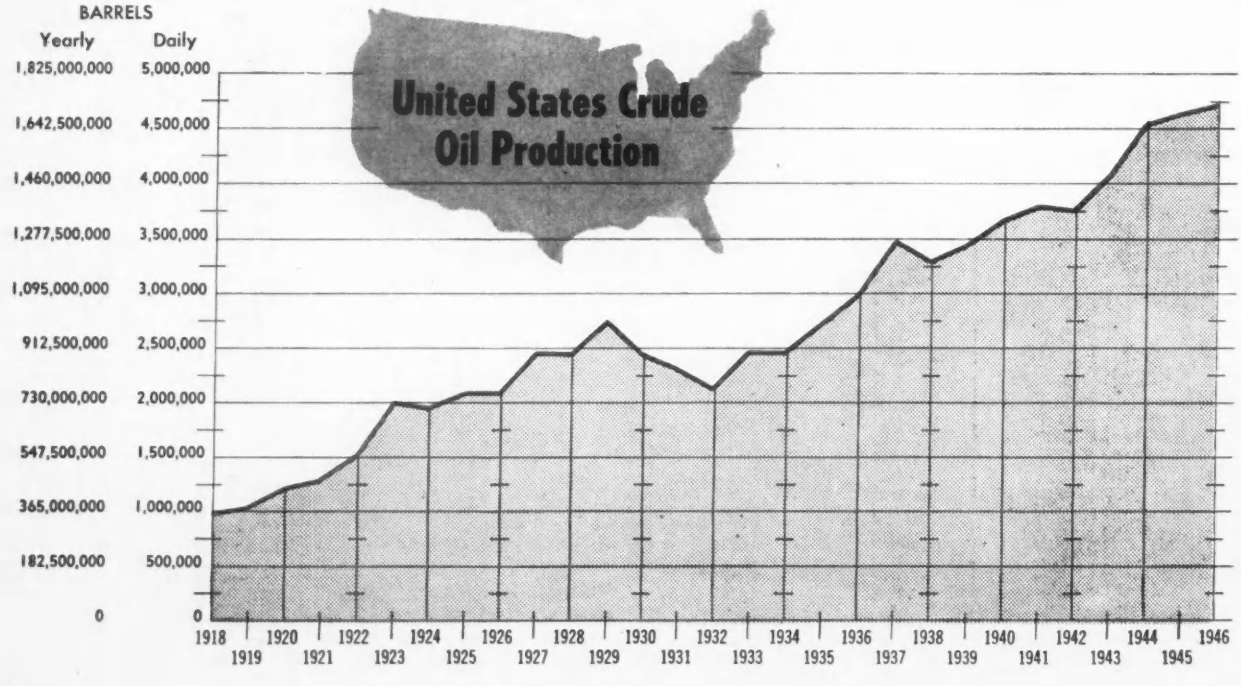
Production last year reached the all-time high of 1,731,889,000 barrels, a gain of some 20 million barrels, or 1.2 percent, over 1945 which had seen 1,711,103,000 barrels produced. Daily average production in 1946 was 4,744,900 barrels, 58,000 barrels more than the daily output of 4,687,000 barrels in the previous 12 months, and in contrast with the prewar peak of 3,842,000 barrels per day during 1941.

Because of the easing of enormous military requirements, it had been generally anticipated that 1946 production would drop far below the 1945 level. Various predictions made at the beginning of the year had indicated an output of around 4,200,000 barrels daily was likely, or almost 550,000 barrels less than the actual volume produced. Most observers had failed to foresee that consumption would show only a very small decline from wartime peaks. The surprisingly small decrease in consumption created a much larger domestic crude oil requirement than foreseen, despite the importation of large quantities of foreign oil.

The production of an unexpectedly large volume of crude oil created a much better year for United States producers than had been expected. They escaped the difficult problem of having to effect a decrease of great magnitude in crude production.

Higher Incomes

Producers also benefited from better prices for crude oil. For the entire year the nation-wide weighted average price paid producers for crude oil was $1.42,



(All Figures in Barrels)

YEAR	Yearly Total	Daily Average	YEAR	Yearly Total	Daily Average	YEAR	Yearly Total	Daily Average
1918.....	355,928,000	975,000	1927.....	901,129,000	2,469,000	1937.....	1,279,160,000	3,505,000
1919.....	378,367,000	1,037,000	1928.....	901,474,000	2,469,000	1938.....	1,214,355,000	3,327,000
1920.....	442,929,000	1,213,000	1929.....	1,007,323,000	2,760,000	1939.....	1,264,962,000	3,466,000
1921.....	472,183,000	1,294,000	1930.....	898,011,000	2,460,000	1940.....	1,353,214,000	3,707,000
1922.....	557,531,000	1,528,000	1931.....	851,081,000	2,332,000	1941.....	1,402,228,000	3,842,000
1923.....	732,407,000	2,007,000	1932.....	785,159,000	2,151,000	1942.....	1,386,645,000	3,799,000
1924.....	713,940,000	1,956,000	1933.....	905,656,000	2,481,000	1943.....	1,505,613,000	4,124,900
1925.....	763,743,000	2,092,000	1934.....	908,065,000	2,488,000	1944.....	1,677,753,000	4,596,500
1926.....	770,874,000	2,112,000	1935.....	996,596,000	2,730,000	1945.....	1,711,103,000	4,687,900
			1936.....	1,099,687,000	3,013,000	1946.....	1,731,889,000	4,744,900

Source: U. S. Bureau of Mines, except for latest year, which has been calculated with aid of Bureau statistics for first 10 months and American Petroleum Institute weekly reports for last two months.

Fails to Halt Upward Trend Crude Oil Production

up 20 cents per barrel from the 1945 level. As a result, producers were paid $2,453,482,000 for their production, an increase in income of $366,947,000 although only 20 million more barrels were produced. These figures do not include subsidies paid stripper wells by the federal government.

During the last half of the year, producers were enjoying higher prices than the year's weighted average. At the beginning of the year, the weighted average price for United States crude oil was $1.22 per barrel. This rose to $1.32 per barrel in April, when OPA permitted a 10 cent increase. From that figure, crude prices went to $1.57 per barrel on July 25 when companies upped posted prices following OPA's demise. From November 19 to the end of the year, the weighted average price was $1.67, the gain representing another 10-cent advance in crude prices generally.

Output Exceeded Needs

The production of a record quantity of crude oil in the face of a decrease in consumption and large importations resulted in the running of much petroleum to stocks. Stocks of all oils increased about 47 million barrels (129,000 barrels daily) during 1946. Part of this increase was a normal replacement of depleted stocks, but the total increase indicates that primary production and imports materially exceeded requirements. This situation caused considerable anxiety, especially since it was not evenly distributed between refined products and crude oil. There was only a small increase in crude oil stocks (about 20,000 barrels daily), but refined product stocks jumped an average of 109,000 barrels daily throughout the year.

Outlook Favorable

It is generally agreed that petroleum consumption in 1947 will be greater than in 1946, and therefore the majority of forecasts have indicated an increase in United States crude oil production although output of natural gasoline and imports from foreign countries are to be larger. However, there is not a unanimous agreement that 1947 crude production will exceed 1946.

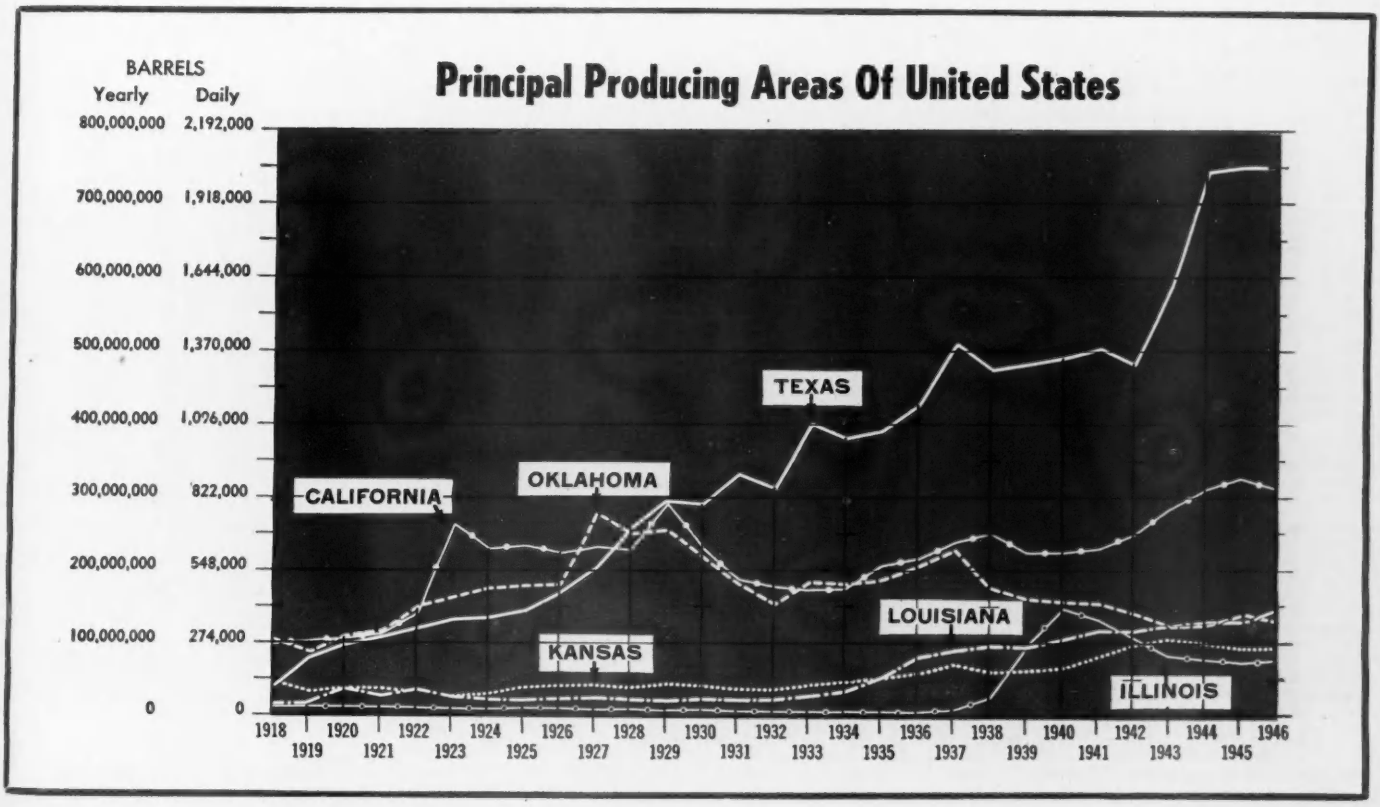
The United States Bureau of Mines anticipates a 4 percent gain in total demand, and on this basis expects 1947 domestic crude production to total 1,746,000,000 barrels, an increase of 15.1 million barrels over 1946. This would constitute a daily average of 4,783,800 barrels for the year, as compared with 4,744,900 barrels produced in 1946. The Bureau's forecast is for the production of 4,740,000 barrels during the first half of the year, and 4,906,000 barrels per day during the last half of the year when demand is expected to be much larger. Similar forecasts have been made by others.

The Economics Advisory Committee of the Interstate Oil Compact Commission is one group that does not see the production prospects for 1947 in so favorable a light. This group recently stated that the situation was such that a domestic crude production of 4,655,000 barrels daily (90,000 barrels less than in 1946) would be adequate to meet an increase in demand of 3 percent. The committee thinks a net withdrawal on stocks of 30,000 barrels daily during 1947 to be desirable, and favors holding production to levels that will result in this action.

On the basis that there will be a 5.9 percent increase in total demand for all oils in 1947, as forecast elsewhere in this issue, indicated necessary supply will require domestic crude production averaging 4,901,000 barrels daily. This would be 3.3 percent above the 4,745,000 barrels produced daily in 1946 and therefore a new record.

This forecast for U. S. crude production allows for a moderate increase in imports and natural gasoline production, and also provides for a small quantity (14,000 barrels per day) to be added to crude stocks.

Producers again will benefit from higher prices, the current average price of $1.67 per barrel comparing with the



weighted average of $1.42 for the entire year of 1946.

Producing Rate Varied

In producing its record anual volume, the nation's production rate varied considerably from month to month. There was a difference of half a million barrels daily below the low and the high points of the year.

During the early months of the year, when still plagued by uncertainties over what postwar conversion was to bring, production followed the very unstable course which had characterized the closing months of 1945. The first two months of the year saw the daily average rate climb sharply, and then, with stocks mounting rapidly, March output was curtailed drastically to the lowest level of the year. Daily average production in January was 4,625,000 barrels, in February 4,719,000 barrels, but in March was only 4,414,000 barrels.

Thereafter, with conditions becoming more stable and consumption much higher than anticipated, the producing rate climbed steadily month by month until it reached the highest level in all history with a recovery of 4,922,000 barrels per day in July. At this point, rising stocks prompted a reduction from such a peak rate, and the remainder of the year saw production slide downward to as low as 4,702,000 barrels per day in December.

Texas Leading Producer

Texas continued to be the largest producing state by a very substantial margin. Instead of falling behind its record 1945 output of 755,533,000 barrels, Texas actually forged ahead to 758,858,000 barrels. This was a daily average of 2,079,100 barrels against 1945's daily average of 2,070,000 barrels. Texas accounted for nearly 44 percent of the oil produced in the United States during the year.

Production statistics by states for all years shown on pages 87-88. For production statistics by individual fields for 1946 and cumulative, see pages 154-186.

West Texas became the biggest producing sector of the state, producing an average of 521,200 barrels daily. This was 49,100 barrels more per day than West Texas produced in 1945, the biggest gain of any of the state's districts. Southwest Texas also showed a substantial increase, its recovery of 363,500 barrels daily or 32,600 barrels more than in 1945. North Texas registered a small increase, but other Texas districts experienced a decrease in output. Largest decline was in the Upper Gulf Coast area, which produced an average of 42,700 less barrels per day in recovering 477,700 barrels per day. The East Texas area dropped 17,900 barrels, to a daily average of 471,800 barrels because of a sharp decrease in output from the big East Texas field.

Louisiana also came through with a good gain, percentagewise particularly. The Pelican State matched its 130,566,000 barrels of 1945 with 142,618,000 barrels during 1946. This constituted a daily average of 390,700 barrels in contrast with 357,700 barrels for the preceding year. North Louisiana's gain was better proportionately than the south half of the state, although the latter continued to be the larger producing area.

The two other big producing states, Oklahoma and California, showed drops in production. California produced 863,300 barrels daily in 1946, a decline of 31,200 barrels. In producing an average of 370,200 barrels per day in 1946, Oklahoma's decline amounted to 8000 barrels daily.

During the year Colorado, with her Rangely field booming, almost trebled its 1945 production, the figures being 12,008,000 barrels against 4,959,000 barrels. This boosted the state's production from a daily average of 13,600 barrels in 1945 to 32,900 barrels during 1946.

The overall picture shows that 17 states registered gains in production over 1945, whereas only 7 states showed losses.

In cumulative production since 1859, the nation's total was boosted to 33,221,649,000 barrels by the 1946 output. Some idea of the huge producing rates of U. S. fields in recent years can be gained from the fact that during the past decade production has been 14½ billion barrels, or 44 percent of all the oil produced in 87 years. And during the past five years, or since the nation's entry into World War II, the United States has produced slightly more than 8 billion barrels or nearly one-fourth of the crude oil produced during its history.

U. S. Crude Production, By States and Districts, December and Years, 1941, 1945 and 1946

From U. S. Bureau of Mines, except November and December, 1946, estimated from A. P. I. weekly reports, and breakdown of Louisiana and Texas by districts based on various sources.

(THOUSANDS OF BARRELS)

STATE OR DISTRICT	PRODUCTION IN DECEMBER: Monthly Total in December				PRODUCTION IN DECEMBER: Daily Average for December			PRODUCTION DURING YEAR: Year Total			PRODUCTION DURING YEAR: Daily Average for Year				Year's Prod. in 1945 as Percent of U.S. Total	Cumulative Prod. To End of 1946	
	1941	1945	1946	% Diff. '45-'46	1941	1945	1946	1941	1945	1946	1941	1945	1946	% Diff. '45-'46		Thousands of Barrels	As Percent of U.S. Cum.
Alabama	.....	24	35	+ 45.8	.....	0.8	1.1	.....	181	387	.....	0.5	1.1	+120.0	0.02	611	.....
Arkansas	2,304	2,377	2,291	— 3.6	74.3	76.7	73.9	26,327	28,613	28,036	72.1	78.4	76.8	— 2.0	1.62	673,039	2.03
California	19,590	26,090	27,209	+ 4.3	631.9	841.6	877.7	230,263	326,482	315,105	630.9	894.5	863.3	— 3.5	18.19	7,286,235	21.93
Colorado	200	656	1,194	+ 82.0	6.5	21.2	38.5	2,150	4,959	12,008	5.9	13.6	32.9	+141.9	0.69	66,476	0.20
Florida	.....	2	7	+250.0	.....	0.1	0.2	.....	30	54	.....	0.1	0.1	+ 80.0	.....	100	.....
Illinois	12,192	6,437	6,221	— 3.4	393.3	207.7	200.7	132,393	75,210	75,547	362.7	206.1	207.0	+ 0.4	4.36	1,248,886	3.76
Indiana	615	427	585	+ 37.0	19.8	13.8	18.9	7,411	4,868	6,812	20.3	13.3	18.7	+ 40.6	0.40	167,345	0.50
Kansas	7,957	7,366	8,365	+ 13.6	256.7	237.6	269.8	83,242	95,997	97,204	228.1	263.0	266.3	+ 1.3	5.61	1,673,597	5.04
Kentucky	394	893	932	+ 4.4	12.7	28.8	30.1	4,762	10,325	10,775	13.0	28.3	29.5	+ 4.2	0.62	215,061	0.65
*Louisiana	10,948	11,323	12,523	+ 10.6	353.2	365.2	404.0	115,908	130,566	142,618	317.6	357.7	390.7	+ 9.2	8.24	1,817,665	5.47
North Louisiana	2,238	2,150	2,899	+ 34.8	72.2	69.3	93.5	24,991	23,589	30,707	68.5	64.6	84.1	+ 30.2	1.77	706,786	2.13
South Louisiana	8,710	9,173	9,624	+ 4.9	281.0	295.9	310.5	90,917	106,977	111,911	249.1	293.1	306.6	+ 4.6	6.46	1,141,233	3.44
Michigan	1,750	1,388	1,365	— 1.7	56.7	44.8	44.0	16,359	17,259	17,105	44.8	47.3	46.9	— 0.8	0.99	256,841	0.77
Mississippi	2,185	1,652	2,573	+ 55.8	70.5	53.3	83.0	15,327	18,775	24,143	42.0	51.4	66.1	+ 28.6	1.39	126,729	0.38
Missouri	4	3	4	+ 33.3	0.1	0.1	0.2	47	45	51	0.1	0.1	0.1	+ 13.3	.....	389	.....
Montana	683	680	703	+ 3.4	22.0	21.9	22.7	7,526	8,397	8,877	20.6	23.0	24.3	+ 5.7	0.51	132,909	0.40
Nebraska	169	26	22	— 15.4	5.5	0.8	0.7	1,898	305	276	5.2	0.8	0.8	— 9.5	0.02	5,046	0.02
New Mexico	3,508	2,952	3,190	+ 8.1	113.2	95.2	102.9	39,569	37,281	36,784	108.4	102.1	100.8	— 1.3	2.13	498,388	1.50
New York	468	367	418	+ 13.9	15.1	11.8	13.5	5,185	4,648	4,899	14.2	12.7	13.4	+ 5.5	0.28	159,096	0.48
Ohio	324	214	260	+ 21.5	10.4	6.9	8.4	3,510	2,828	2,938	9.6	7.8	8.1	+ 3.8	0.17	607,455	1.83
Oklahoma	13,310	11,857	11,489	— 3.1	429.4	382.5	370.6	154,702	138,036	135,122	423.8	378.2	370.2	— 2.1	7.80	5,648,796	17.00
Pennsylvania	1,527	963	1,107	+ 15.0	49.3	31.1	35.7	16,750	12,515	13,067	45.9	34.3	35.8	+ 4.4	0.76	1,076,644	3.24
Tennessee	1	1	1	.....	.....	.....	.....	12	12	11	.....	.....	.....	— 8.3	.....	469	.....
*Texas	47,436	59,916	61,896	+ 3.3	1,530.2	1,932.8	1,996.6	505,572	755,533	758,858	1,385.1	2,070.0	2,079.1	+ 0.4	43.82	10,425,332	31.38
East Texas Field	11,945	9,526	9,785	+ 2.7	385.3	307.3	315.6	132,915	129,097	120,256	364.2	353.7	329.5	— 6.8	6.94	2,357,467	7.10
Rest of East Texas	2,711	4,117	4,160	+ 1.0	87.5	132.8	134.2	29,574	49,659	51,934	81.0	136.0	142.3	+ 4.6	3.00	767,005	2.31
North Texas	4,341	4,637	4,731	+ 2.0	140.0	149.6	152.6	48,396	53,776	57,949	132.6	147.3	158.8	+ 7.8	3.35	1,374,534	4.14
West Texas	9,364	14,431	16,314	+ 13.0	302.1	465.5	526.2	93,404	172,303	190,242	255.9	472.1	521.2	+ 10.4	10.98	1,904,226	5.73
Texas Panhandle	2,868	2,511	2,515	+ 0.2	92.5	81.0	81.1	29,070	31,890	30,309	79.6	87.4	83.0	— 5.0	1.75	568,492	1.71
Gulf Coast Upper	9,399	14,559	13,130	— 9.8	303.2	469.6	423.6	99,187	189,956	174,363	271.7	520.4	477.7	— 8.2	10.07	2,211,593	6.66
Southwest Texas	6,981	9,737	11,261	+ 15.7	225.2	314.1	363.3	75,721	120,777	132,691	207.5	330.9	363.5	+ 9.9	7.66	1,256,476	3.78
Utah	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	0.1	.....	.....	.....	.....	11	.....
West Virginia	302	220	229	+ 4.1	9.7	7.1	7.4	3,433	2,879	2,947	9.4	7.9	8.1	+ 2.5	0.17	430,022	1.30
Wyoming	2,558	2,661	3,225	+ 21.2	82.5	85.8	104.0	29,878	35,359	38,262	81.9	96.9	104.8	+ 8.2	2.21	703,930	2.12
Undistributed	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	577	.....
Total United States	128,434	138,495	145,844	+ 5.3	4,143.0	4,467.6	4,704.6	1,402,228	1,711,103	1,731,889	3,841.7	4,688.0	4,744.9	+ 1.2	100.00	33,221,649	100.00

* Data on Louisiana and Texas by districts are from various sources and so do not agree exactly with state totals, which are on Bureau of Mines basis.

United States Crude Oil Production, by States, by Years

Data in thousands of barrels; from *Mineral Resources and Minerals Yearbook*, except where otherwise indicated in footnotes.

Year	Alabama	Arkansas	California	Colorado	Florida	Illinois	Indiana	Kansas	Kentucky	Louisiana	Michigan	Mississippi	Missouri	Montana	Nebraska	New Mexico
1859	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1860	.....	.....	.....	.....	.....	.....	.....	.....	E	.....	.....	.....	.....	.....	.....	.....
1861	.....	.....	.....	.....	.....	.....	.....	.....	E	.....	.....	.....	.....	.....	.....	.....
1862	.....	.....	.....	.....	.....	.....	.....	.....	E	.....	.....	.....	.....	.....	.....	.....
1863	.....	.....	.....	.....	.....	.....	.....	.....	E	.....	.....	.....	.....	.....	.....	.....
1864	.....	.....	.....	.....	.....	.....	.....	.....	E	.....	.....	.....	.....	.....	.....	.....
1865	.....	.....	.....	.....	.....	.....	.....	.....	E	.....	.....	.....	.....	.....	.....	.....
1866	.....	.....	.....	.....	.....	.....	.....	.....	E	.....	.....	.....	.....	.....	.....	.....
1867	.....	.....	.....	.....	.....	.....	.....	.....	E	.....	.....	.....	.....	.....	.....	.....
1868	.....	.....	.....	.....	.....	.....	.....	.....	E	.....	.....	.....	.....	.....	.....	.....
1869	.....	.....	.....	.....	.....	.....	.....	.....	E	.....	.....	.....	.....	.....	.....	.....
1870	.....	.....	.....	.....	.....	.....	.....	.....	E	.....	.....	.....	.....	.....	.....	.....
1871	.....	.....	.....	.....	.....	.....	.....	.....	E	.....	.....	.....	.....	.....	.....	.....
1872	.....	.....	.....	.....	.....	.....	.....	.....	E	.....	.....	.....	.....	.....	.....	.....
1873	.....	.....	.....	.....	.....	.....	.....	.....	E	.....	.....	.....	.....	.....	.....	.....
1874	.....	.....	.....	.....	.....	.....	.....	.....	E	.....	.....	.....	.....	.....	.....	.....
1875	.....	.....	.....	.....	.....	.....	.....	.....	E	.....	.....	.....	.....	.....	.....	.....
1876	.....	.....	12	.....	.....	.....	.....	.....	G E	.....	.....	.....	.....	.....	.....	.....
1877	.....	.....	13	.....	.....	.....	.....	.....	G E	.....	.....	.....	.....	.....	.....	.....
1878	.....	.....	15	.....	.....	.....	.....	.....	G E	.....	.....	.....	.....	.....	.....	.....
1879	.....	.....	20	.....	.....	.....	.....	.....	G E	.....	.....	.....	.....	.....	.....	.....
1880	.....	.....	40	.....	.....	.....	.....	.....	G E	.....	.....	.....	.....	.....	.....	.....
1881	.....	.....	100	.....	.....	.....	.....	.....	G E	.....	.....	.....	.....	.....	.....	.....
1882	.....	.....	129	.....	.....	.....	.....	.....	G E	.....	.....	.....	.....	.....	.....	.....
1883	.....	.....	143	.....	.....	.....	.....	.....	G5	.....	.....	.....	.....	.....	.....	.....
1884	.....	.....	262	.....	.....	.....	.....	.....	G4	.....	.....	.....	.....	.....	.....	.....
1885	.....	.....	325	.....	.....	.....	.....	.....	G5	.....	.....	.....	.....	.....	.....	.....
1886	.....	.....	377	.....	.....	.....	.....	.....	G5	.....	.....	.....	.....	.....	.....	.....
1887	.....	.....	678	76	.....	.....	.....	.....	G5	.....	.....	.....	.....	.....	.....	.....
1888	.....	.....	690	298	.....	.....	.....	.....	G5	.....	.....	.....	.....	.....	.....	.....
1889	.....	.....	303	317	.....	1	33	1	G5	.....	.....	.....	H	.....	.....	.....
1890	.....	.....	307	369	.....	1	64	1	G6	.....	.....	.....	H	.....	.....	.....
1891	.....	.....	324	666	.....	1	137	1	G9	.....	.....	.....	H	.....	.....	.....
1892	.....	.....	385	824	.....	1	698	5	G7	.....	.....	.....	H	.....	.....	.....
1893	.....	.....	470	594	.....	1	2,335	18	G3	.....	.....	.....	H	.....	.....	.....
1894	.....	.....	706	516	.....	H	3,689	40	G2	.....	.....	.....	H	.....	.....	.....
1895	.....	.....	1,209	438	.....	H	4,386	44	G2	.....	.....	.....	H	.....	.....	.....
1896	.....	.....	1,253	361	.....	H	4,681	114	G2	.....	.....	.....	H	.....	.....	.....
1897	.....	.....	1,903	385	.....	1	4,122	81	G H	.....	.....	.....	H	.....	.....	.....
1898	.....	.....	2,257	444	.....	H	3,731	72	G6	.....	.....	.....	H	.....	.....	.....
1899	.....	.....	2,642	390	.....	H	3,848	70	G18	.....	.....	.....	H	.....	.....	.....
1900	.....	.....	4,325	317	.....	H	4,874	75	G62	.....	J	.....	J2	.....	.....	.....
1901	.....	.....	8,787	461	.....	H	5,757	179	G137	.....	J	.....	J2	.....	.....	.....
1902	.....	.....	13,984	397	.....	H	7,481	332	G185	549	J	.....	J1	.....	.....	.....
1903	.....	.....	24,382	484	.....	.....	9,186	932	G554	918	J	.....	J3	.....	.....	.....
1904	.....	.....	29,649	501	.....	.....	11,339	4,251	G998	2,959	J	.....	J3	.....	.....	.....
1905	.....	.....	33,428	376	.....	181	10,964	I3,750	G1,217	8,910	J	.....	J3	.....	.....	.....
1906	.....	.....	33,099	328	.....	4,397	7,674	I3,627	G1,214	9,077	J	.....	J3	.....	.....	.....
1907	.....	.....	39,748	332	.....	24,282	5,128	2,410	G821	5,000	J	.....	J4	.....	.....	.....
1908	.....	.....	44,855	380	.....	33,686	3,283	1,801	728	5,789	J	.....	J15	.....	.....	.....
1909	.....	.....	55,472	311	.....	30,898	2,296	1,264	639	3,060	J	.....	J6	.....	.....	.....
1910	.....	.....	73,011	240	.....	33,143	2,160	1,128	469	6,841	J	.....	J4	.....	.....	.....
1911	.....	.....	81,134	227	.....	31,317	1,695	1,279	472	10,721	J	.....	J8	.....	.....	.....
1912	.....	.....	87,269	206	.....	28,602	970	1,593	484	9,263	K	.....	.....	.....	.....	.....
1913	.....	.....	97,788	189	.....	23,894	956	2,375	525	12,499	K	.....	K	.....	.....	K
1914	.....	.....	99,775	223	.....	21,920	1,336	3,104	503	14,309	K	.....	K	.....	.....	.....
1915	.....	.....	86,592	208	.....	19,042	876	2,823	437	18,192	K	.....	K	.....	.....	.....
1916	.....	.....	90,952	197	.....	17,714	769	8,738	L1,202	15,248	K	.....	K	45	.....	.....
1917	.....	.....	93,878	121	.....	15,777	760	36,536	L3,088	11,392	K	.....	.....	100	.....	.....
1918	.....	.....	97,532	143	.....	13,366	878	45,451	L4,368	16,043	K	.....	.....	69	.....	.....
1919	.....	.....	101,183	121	.....	11,960	972	33,048	9,278	17,188	K	.....	K	90	.....	K
1920	.....	K	103,377	111	.....	10,774	945	39,005	8,738	35,714	.....	.....	K	340	.....	K
1921	.....	10,473	112,600	108	.....	10,043	1,158	36,456	9,013	27,103	.....	.....	K	1,509	.....	K
1922	.....	12,712	138,468	97	.....	9,383	1,087	31,766	8,973	35,376	.....	.....	K	2,449	.....	K
1923	.....	36,610	262,876	86	.....	8,707	1,043	28,250	8,069	24,919	.....	.....	K	2,782	.....	K
1924	.....	46,028	228,933	445	.....	8,081	935	28,836	7,407	21,124	.....	.....	.....	2,815	.....	98
1925	.....	77,398	232,492	1,226	.....	7,863	829	38,357	6,759	20,272	4	.....	.....	4,091	.....	1,060
1926	.....	58,332	224,673	2,768	.....	7,760	808	41,498	6,274	23,201	94	.....	.....	7,727	.....	1,666
1927	.....	40,005	231,196	2,831	.....	6,994	852	41,069	6,719	22,818	439	.....	.....	5,058	.....	1,226
1928	.....	32,096	231,811	2,774	.....	6,462	1,052	38,596	7,359	21,847	594	.....	.....	4,015	.....	943
1929	.....	24,917	292,534	2,358	.....	6,319	981	42,813	7,775	20,554	4,528	.....	.....	3,980	.....	1,830
1930	.....	19,702	227,329	1,656	.....	5,736	994	41,638	7,389	23,272	3,911	.....	.....	3,349	.....	10,189
1931	.....	14,791	188,830	1,545	.....	5,039	840	37,018	6,456	21,804	3,789	.....	.....	2,830	.....	15,227
1932	.....	12,051	178,128	1,136	.....	4,673	806	34,848	6,287	21,807	6,910	.....	K	2,457	.....	12,455
1933	.....	11,686	172,010	919	.....	4,244	737	41,976	4,608	25,168	7,942	K	K	2,273	.....	14,116
1934	.....	11,182	174,305	1,139	.....	4,479	838	46,482	4,860	32,869	10,603	K	K	3,603	.....	16,864
1935	.....	11,008	207,832	1,560	.....	4,322	777	54,843	5,258	50,330	15,776	K	K	4,603	.....	20,483
1936	.....	10,469	214,773	1,650	.....	4,475	822	58,317	5,633	80,491	11,928	.....	K	5,868	.....	27,223
1937	.....	11,764	238,521	1,605	.....	7,499	844	70,761	5,484	90,924	16,628	.....	K	5,805	.....	38,854
1938	.....	18,180	249,749	1,412	.....	24,075	995	60,064	5,821	95,208	18,745	.....	K	4,946	.....	35,759
1939	.....	21,238	224,354	1,404	.....	94,912	1,711	60,703	5,621	93,646	23,462	107	40	5,960	2	37,637
1940	.....	25,775	223,881	1,626	.....	147,647	4,978	66,139	5,188	103,584	19,753	4,400	44	6,728	276	39,129
1941	.....	26,327	230,263	2,150	.....	132,393	7,411	83,242	4,762	115,908	16,359	15,327	47	7,526	1,898	39,569
1942	.....	26,628	248,326	2,199	.....	106,391	6,743	97,636	4,534	115,785	21,754	28,833	36	8,074	1,237	31,544
1943	.....	27,600	284,188	2,320	4	82,260	5,283	106,178	7,883	123,592	20,768	18,807	36	7,916	635	38,896
1944	43	29,418	311,793	2,944	12	77,413	5,118	98,762	9,621	129,207	18,490	16,337	36	8,627	417	39,555
1945	181	28,613	326,482	4,959	30	75,210	4,868	95,997	10,325	130,566	17,259	18,775	45	8,397	305	37,281
1946P	387	28,036	315,105	12,008	54	75,547	6,812	97,204	10,775	142,618	17,105	24,143	51	8,877	276	36,784
Total	611	673,039	7,286,235	66,476	100	1,248,886	167,345	1,673,597	215,061	1,817,665	256,841	126,729	389	132,909	5,046	498,388

A Utah production estimated at 3,650 barrels in 1939: 3,126 barrels in 1940; and 189,726 barrels cumulative thorugh 1940.

B *Petroleum in the United States and Possessions*, by Arnold and Kemnitzer, shows for Alaska the following data: 1904-1919, estimated, 56,000 barrels; 1920, 11,000 barrels; 1921, 10,000 barrels; 1922-1928, estimated, 73,000 barrels; total, 1904-1928, 150,000 barrels.

C "Unclassified" includes 1912, Alaska and Michigan; 1913, Alaska, Michigan, Missouri and New Mexico; 1914-16, Alaska, Michigan and Missouri; 1917-18, Alaska and Michigan; 1919, Alaska, Michigan, Missouri and New Mexico; 1920, Alaska, Arkansas, Missouri, New Mexico and Utah; 1921-23, Alaska, Missouri and New Mexico; 1924-31, Alaska and Utah; 1932, Alaska, Missouri and Utah; 1933, Alaska, Mississippi, Missouri and Utah; 1934, Mississippi, Missouri and Utah; 1935, Mississippi, Missouri, Tennessee and Utah; 1936-40, Missouri, Tennessee and Utah; 1943, Virginia, 2; 1946, Virginia, 3.

D Pennsylvania and New York separated in years 1864-1881, by aid of *Petroleum in the United States and Possessions*, by Arnold and Kemnitzer.

E *Petroleum in the United States and Possessions*, by Arnold and Kemnitzer, gives the following additional estimates which are not shown by the official *Mineral Resources;* Ohio, 1860-1875, 200,000 barrels; West Virginia, 1860-1875, 2,800,000 barrels; Kentucky, 1860-1882, 161,000 barrels.

United States Crude Oil Production, by States, by Years—(Continued)

Data in thousands of barrels; from *Mineral Resources and Minerals Yearbook*, except where otherwise indicated in footnotes.

New York	Ohio	Oklahoma	Pennsylvania	Tennessee	Texas	[A] Utah	West Virginia	Wyoming	[B] Alaska	[C] Unclassified	Total United States	Total Value At Wells (Thousands of Dollars)	[O] Average Value Per Bbl.	YEAR
.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	2	$ 32	$20.00	1859
.....	E	.....	500	.....	.....	.....	E	.....	.....	.....	500	4,800	9.60	1860
.....	E	.....	2,114	.....	.....	.....	E	.....	.....	.....	2,114	1,036	.52	1861
.....	E	.....	3,057	.....	.....	.....	E	.....	.....	.....	3,057	3,210	1.05	1862
.....	E	.....	2,611	.....	.....	.....	E	.....	.....	.....	2,611	8,226	3.15	1863
D F H	E	.....	D F 2,116	.....	.....	.....	E	.....	.....	.....	2,116	20,897	8.15	1864
D100	E	.....	D2,398	.....	.....	.....	E	.....	.....	.....	2,498	16,460	6.59	1865
D144	E	.....	L3,454	.....	.....	.....	E	.....	.....	.....	3,598	13,455	3.75	1866
D134	E	.....	D3,213	.....	.....	.....	E	.....	.....	.....	3,347	8,067	2 40	1867
D146	E	.....	D3,500	.....	.....	.....	E	.....	.....	.....	3.646	13,217	3.62	1868
D169	E	.....	D4,046	.....	.....	.....	E	.....	.....	.....	4,215	23,730	5.60	1869
D211	E	.....	D5,050	.....	.....	.....	E	.....	.....	.....	5,261	20,504	3.90	1870
D208	E	.....	D4,997	.....	.....	.....	E	.....	.....	.....	5,205	22,591	4.40	1871
D252	E	.....	D6,041	.....	.....	.....	E	.....	.....	.....	6.293	21.440	3.75	1872
D396	E	.....	D9 498	.....	.....	.....	E	.....	.....	.....	9.894	18,100	1.80	1873
D437	E	.....	D10,490	.....	.....	.....	E	.....	.....	.....	10,927	12,648	1.15	1874
D352	E	.....	D8,436	.....	.....	.....	E	.....	.....	.....	8,788	7.368	.97	1875
D359	32	.....	D8,610	G	.....	.....	120	.....	.....	.....	9,133	22,983	2.52	1876
D525	30	.....	D12,610	G	.....	.....	172	.....	.....	.....	13,350	31,789	2.38	1877
D607	38	.....	D14,557	G	.....	.....	180	.....	.....	.....	15,397	18,045	1.17	1878
D787	29	.....	D18,898	G	.....	.....	180	.....	.....	.....	19.914	17.211	.86	1879
D1,041	39	.....	D24,987	G	.....	.....	179	.....	.....	.....	26,286	24,601	.94	1880
D1,095	34	.....	D26,281	G	.....	.....	151	.....	.....	.....	27,661	25,448	.92	1881
6,685	40	.....	23,368	G	.....	.....	128	.....	.....	.....	30,350	23,631	.78	1882
4,004	47	.....	19,125	G	.....	.....	126	.....	.....	.....	23,450	25,790	1.10	1883
3,231	90	.....	20.541	G	.....	.....	90	.....	.....	.....	24,218	20,596	.85	1884
2,658	662	.....	18.118	G	.....	.....	91	.....	.....	.....	21,859	19,198	.88	1885
2,151	1.783	.....	23.647	G	.....	.....	102	.....	.....	.....	28.065	19.996	.71	1886
2,075	5.023	.....	20.281	G	.....	.....	145	.....	.....	.....	28,283	18.877	.67	1887
1,789	10.011	.....	14 700	G	.....	.....	119	.....	.....	.....	27.612	17,948	65	1888
1,897	12,472	.....	19 591	G	H	.....	544	.....	.....	.....	35.164	26.963	77	1889
1,658	16.125	.....	26,800	G	H	.....	493	.....	.....	.....	45,824	35,365	.77	1890
1,585	17.740	H	31,424	G	H	.....	2,406	.....	.....	.....	54.293	30.527	.56	1891
1,273	16.363	H	27.149	G	H	.....	3,810	.....	.....	.....	50.515	25,907	.51	1892
1,032	16.249	H	19,283	G	H	.....	8,446	.....	.....	.....	48.431	28.950	60	1893
942	16.792	H	18,078	G	H	.....	8,577	2	.....	.....	49.344	35,522	.72	1894
913	19.545	H	18,231	G	H	.....	8,120	4	.....	.....	52,892	57,632	1.09	1895
1,205	23.941	H	19,379	G	1	.....	10,020	3	.....	.....	60.960	58.519	.96	1896
1,279	21,561	1	17,983	G	66	.....	13,090	4	.....	.....	60,476	40,874	.68	1897
1,205	18.739	.....	14,743	G	546	.....	13.615	6	.....	.....	55,364	44,193	.80	1898
1,321	21,142	.....	13.054	G	669	.....	13,911	6	.....	.....	57,071	64,604	1.13	1899
1,301	22,363	6	13,258	G	836	.....	16,196	6	.....	.....	63,621	75,989	1.19	1900
1,207	21,648	10	12,625	G	4,394	.....	14,177	5	.....	.....	69.389	66,417	.96	1901
1,120	21,014	37	12,064	G	18.084	.....	13.513	6	.....	.....	88,767	71.179	.80	1902
1,163	20.480	139	11,355	G	17,956	.....	12,900	9	.....	.....	100.461	94,694	.94	1903
1,113	18 877	1,367	11,126	G	22,241	.....	12,645	12	N	.....	117,081	101,175	.86	1904
1,118	16.347	I8,264	10,437	G	28.136	.....	11,578	8	.....	.....	134,717	84,157	.62	1905
1,243	14,788	I18.091	10,257	G	12.568	.....	10,121	7	.....	.....	126,494	92.445	73	1906
1,212	12,207	43,524	10,000	G	12,323	M	9,095	M9	N	.....	166.095	120,107	.72	1907
1,160	10.859	45.799	9,424	.....	11,207	M	9,523	M18	.....	.....	178,527	129,079	.72	1908
1,135	10.633	47,859	9,299	.....	9,534	M	10,745	M20	.....	.....	183,171	128,329	.70	1909
1.054	9,916	52,029	8,795	.....	8,899	M	11,753	M115	.....	.....	209.557	127,900	61	1910
953	8,817	56,069	8,248	.....	9,526	M	9,796	M187	N	.....	220,449	134,045	.61	1911
874	8,969	51,427	7,838	.....	11,735	M	12,129	M1,572	K	4	222,935	164,213	.74	1912
948	8,781	63,579	7,917	.....	15,010	N	11,567	2,407	K	11	248,446	237,121	95	1913
939	8,536	73,632	8,170	.....	20,068	N	9,680	3,560	K	8	265,763	214,125	.81	1914
888	7,825	97,915	7,838	.....	24,943	N	9,265	4,246	K	14	281,104	179,463	64	1915
874	7.744	107,072	7.593	L1	27.645	N	8.731	6,234	K	8	300,767	330,900	1.10	1916
880	7,751	107,508	7,733	L12	32.413	N	8,379	8,978	K	10	335 316	522,635	1.56	1917
809	7,285	103,347	7.408	L8	38,750	N	7,867	12,596	K	8	355.928	703,944	1.98	1918
851	7,736	86,911	8,137	15	79,366	N	8,327	13,172	K	12	378.367	760.266	2.01	1919
906	7,400	106,206	7,438	14	96,868	K	8,249	16,831	K	13	442,929	1.360,745	3.07	1920
988	7,335	114,634	7,418	12	106.166	.....	7,822	19,333	K	12	472,183	814,745	1.73	1921
1,000	6,781	149,571	7,425	10	118,684	.....	7,021	26,715	K	13	557,531	895,111	1.61	1922
1,250	7.085	160,929	7,609	8	131.023	.....	6,358	44,785	K	18	732,407	978,430	1.34	1923
1,440	6,811	173,538	7,486	10	134,522	K	5,920	39,498	K	13	713,940	1,022,683	1.43	1924
1.695	7.212	176.768	8,097	24	144.648	K	5,763	29,173	K	12	763,743	1.284,960	1.68	1925
1,956	7.272	179,195	8,961	43	166,916	K	5,946	25,776	K	8	770,874	1,447,760	1 88	1926
2,242	7.593	277.775	9,526	60	217.389	K	6,023	21.307	K	7	901,129	1,172.830	1.30	1927
2,603	7,015	249.857	9,956	46	257.320	K	5,661	21,461	K	6	901,474	1,054.880	1.17	1928
3,377	6,743	255,004	11,820	19	296,876	K	5,574	19,314	K	7	1,007,323	1,280,417	1.27	1929
3,647	6,486	216,486	12,803	21	290,457	K	5,071	17,868	K	7	898,011	1,070,200	1.19	1930
3,363	5,327	180,574	11,892	6	332,437	K	4,472	14.834	K	7	851,081	550.630	65	1931
3,508	4,644	153,244	12,412	5	312.478	K	3,876	13,418	K	16	785,159	680,460	.87	1932
3,181	4,235	182,251	12,624	5	402,609	K	3,815	11,227	K	30	905,656	608,000	.67	1933
3.804	4,234	180,107	14,478	10	381.516	K	4,095	12,556	.....	41	908,065	904.825	1.00	1934
4.236	4,082	185,288	15.810	K	392,666	K	3,902	13,755	.....	65	996,596	961,440	.96	1935
4,663	3,847	206.555	17,070	K	427,411	K	3,847	14,582	.....	63	1,099,687	1,199,820	1.09	1936
5,478	3,559	228,839	19,189	K	510,318	K	3,845	19,166	.....	77	1,279,160	1,513,340	1.18	1937
5,045	3,298	174,994	17,426	K	475,850	H	3,684	19,022	.....	82	1,214,355	1,373,060	1.13	1938
5,098	3,156	159,913	17,382	50	483,528	4	3,580	21,454	.....	.....	1,264,962	1,294,470	1.02	1939
4,999	3,159	156,164	17,353	24	493,209	3	3,444	25,711	.....	.....	1,353,214	1,385,440	1.02	1940
5,185	3,510	154,702	16,750	12	505,572	4	3,433	29,878	.....	.....	1,402,228	1,602,000	1.14	1941
5,421	3,543	140,690	17,779	9	483,097	.....	3,574	32,812	.....	.....	1,386,645	1.643.470	1.19	1942
5,059	3,322	123,152	15,757	10	594,343	.....	3,349	34,253	.....	2	1,505,613	1,809,020	1.20	1943
4,697	2,937	124,616	14,118	12	748,122	.....	3,070	32,388	.....	.....	1,677,753	2,046,859	1.22	1944
4,648	2,828	138,036	12,515	12	755,533	.....	2,879	35,359	.....	.....	1,711,103	2,087,546	1.22	1945
4,899	2,938	135,122	13,067	11	758,858	.....	2,947	38,262	.....	3	1,731,889	2,453,482	1.42	.....[P]1946
159,096	607,455	5,648,796	1,076,644	469	10,425,332	11	430,022	703,930	.....	577	33,221,649	39,785,756	1.20	.....Total

[F] New York included with Pennsylvania.
[G] Tennessee included with Kentucky, 1876-1907, inclusive.
[H] Less than 500 barrels.
[I] Figures for Oklahoma and Kansas for years 1905-1906 shown together by *Mineral Resources;* here divided by aid of *Petroleum in the United States and Possessions,* by Arnold and Kemnitzer.
[J] Michigan shown with Missouri in 1900-1911.
[K] Included under "Unclassified."
[L] Kentucky and Tennessee figures in years 1916-18 obtained with aid of *Mineral Resources* and *Petroleum in the United States and Possessions,* by Arnold and Kemnitzer.
[M] Insignificant production of Utah (mostly used as fuel) shown with Wyoming.
[N] Little production but no record available.
[O] Figures on average price per barrel for years 1859-1875 taken from *Petroleum in the United States and Possessions,* by Arnold and Kemnitzer: remainder from *Mineral Resources* and *Minerals Yearbook* except 1943, 1944, and 1945 estimated.
[P] Bureau of Mines figures for first 10 months; November and December estimated by THE OIL WEEKLY, with aid of weekly reports of American Petroleum Institute and other sources.

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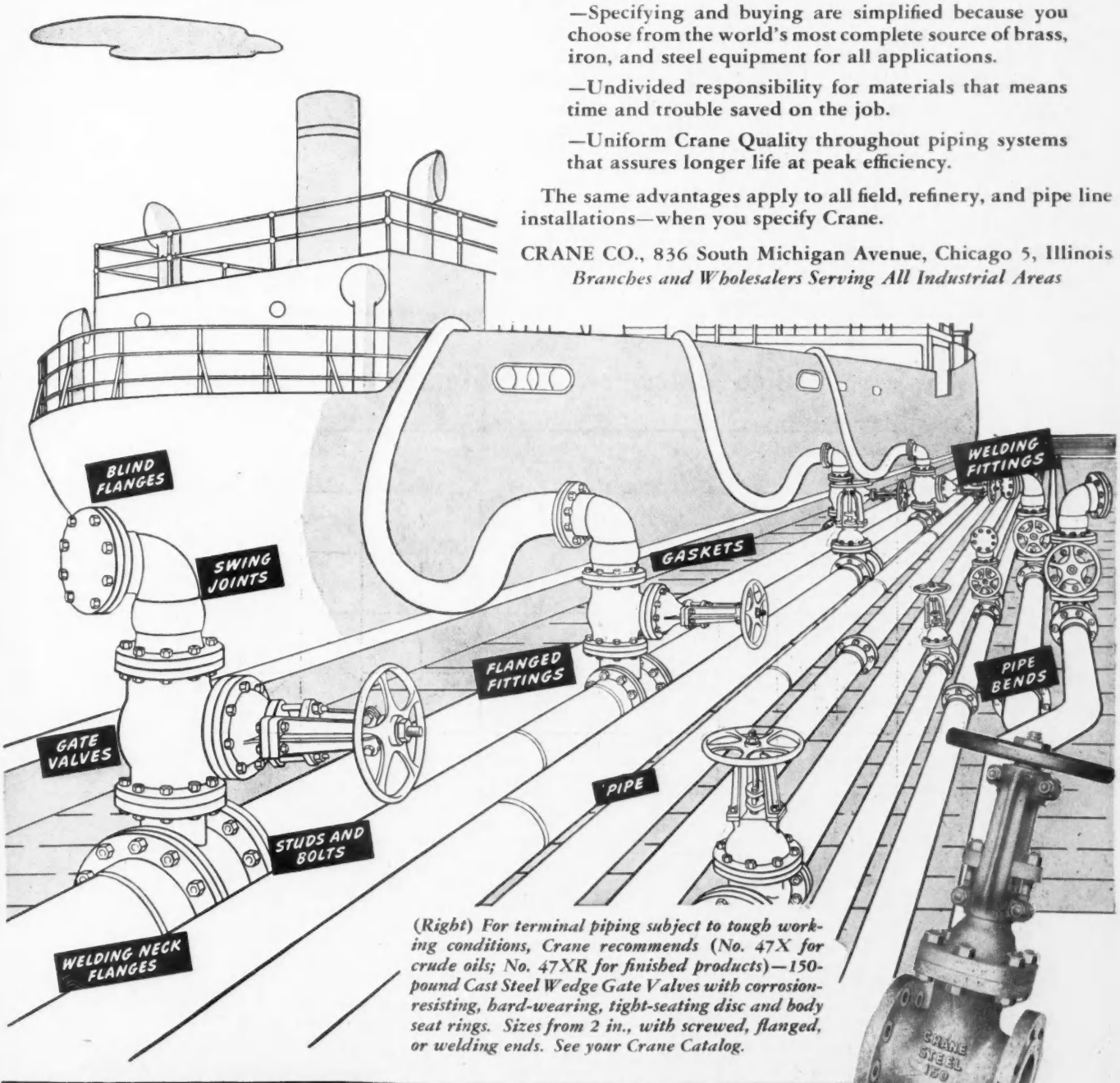

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FOR EVERY PIPING SYSTEM

Stocks Higher As Year

FOLLOWING sharp reduction of stocks during the war years and an exceptionally large rebuilding of stocks in 1946, the industry is in a fairly satisfactory inventory position at the beginning of 1947, and this year probably will not bring any large net change in the stocks of all oils in the aggregate. The large build-up of inventories in 1946 put total stocks at levels which probably will still be adequate at the end of 1947, although adjustments should be made for individual categories of oils.

In 1946 the stocks of all oils were increased by 47,079,000 barrels, an average of 129,000 barrels daily, of which 20,000 daily was crude oil, 29,000 daily residual fuel oil, 62,000 daily distillate fuel oil, 18,000 daily kerosine. A slight reduction in motor fuel stocks offset small increases for miscellaneous products.

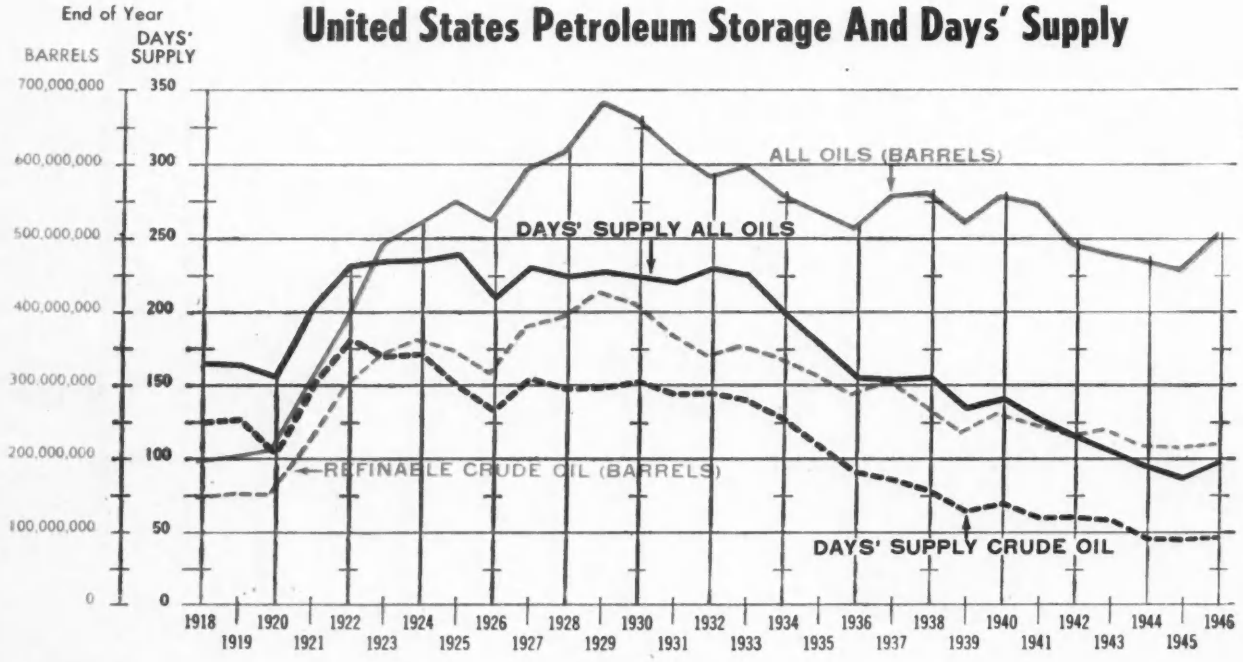
It seems likely that total stocks will be nearly the same at the end of 1947 as at the beginning, and on present indications, either a decrease or an increase would not be over 15,000 or 20,000 barrels daily as an average for the year. For the purpose of the supply and demand forecast THE OIL WEEKLY presented in this issue, it was assumed that there would be no net change in total stocks of refined products, an increase of 14,000 barrels daily in crude oil, and an addition of 1000 barrels daily to natural gasoline storage. This would be a total addition of 15,000 barrels daily to stocks of all oils or a total of about 5,500,000 barrels for the year.

Stocks of all oils boosted an average of 129,000 barrels daily during 1946

Need of Flexibility

The allowance for a moderate increase in crude stocks is based on the possibility that some additions may seem to be needed in some areas to provide

United States Petroleum Storage And Days' Supply



(All Figures in Barrels)

	TOTAL ALL OILS		REFINABLE CRUDE OIL			TOTAL ALL OILS		REFINABLE CRUDE OIL			TOTAL ALL OILS		REFINABLE CRUDE OIL	
End of Year	Barrels	Days' Supply	Barrels	Days' Supply	End of Year	Barrels	Days' Supply	Barrels	Days' Supply	End of Year	Barrels	Days' Supply	Barrels	Days' Supply
1918.....	193,411,000	165	144,336,000	125	1928.....	621,010,000	224	392,629,000	148	1938.....	567,703,000	156	274,165,000	79
1919.....	200,383,000	164	149,356,000	127	1929.....	689,166,000	228	428,445,000	149	1939.....	525,838,000	135	238,910,000	66
1920.....	209,845,000	156	149,448,000	103	1930.....	665,497,000	224	411,882,000	153	1940.....	563,277,000	141	264,079,000	70
1921.....	294,428,000	203	217,324,000	150	1931.....	621,673,000	221	370,194,000	144	1941.....	552,328,000	127	247,499,000	61
1922.....	385,349,000	232	295,708,000	181	1932.....	590,106,000	230	339,875,000	145	1942.....	497,940,000	116	234,889,000	61
1923.....	492,088,000	235	340,637,000	169	1933.....	602,198,000	226	354,223,000	140	1943.....	485,698,000	106	243,506,000	59
1924.....	520,287,000	236	360,475,000	171	1934.....	564,350,000	199	337,254,000	128	1944.....	477,089,000	95	220,862,000	46
1925.....	552,464,000	239	345,863,000	150	1935.....	541,700,000	178	314,855,000	109	1945.....	463,579,000	87	218,763,000	45
1926.....	527,084,000	210	315,029,000	133	1936.....	519,229,000	155	288,579,000	91	1946.....	510,658,000	96	224,836,000	45
1927.....	597,176,000	231	379,660,000	155	1937.....	564,728,000	154	305,833,000	87					

Begins

necessary flexibility in pipe line and refinery operations.

The assumption that total stocks of refined products may be nearly the same at the end of 1947 as at the end of 1946 takes into account a probable increase in motor fuel stocks and a possible decrease of similar volume in stocks of residual fuel oil, with distillate fuel oil and kerosine stocks perhaps showing no great change. Stocks of motor fuel totaled 92,089,000 barrels at the end of 1946, down about 1,500,000 barrels from a year previously, and represented 43 days' supply at the 1946 rate of demand. For 1947 a higher rate of demand is indicated, and stocks could be increased about 5,000,000 barrels during the year without increasing the year-end inventory above the 43 days' supply held at the end of 1946.

It is possible, however, that some increase in motor fuel stocks may be partly offset by reduction in stocks of residual fuel oil. It is forecast that residual fuel oil demand will be slightly larger in 1947 than in 1946, but some difficulty in supplying the demand may occur because of probable lower yields of residual at refineries as the plants make improvements and achieve increased efficiency. Deficiency of domestic production of residual fuel oil would tend to increase imports and cause withdrawals from storage. However, the residual stocks of 47,649,000 barrels at the end of 1946 represented only 36 days' supply, and the 37,158,000 barrels or 25 days' supply at the end of 1945 had led to a temporary shortage in the spring of 1946, indicating that an essential minimum may be at least 30 days' supply or around 40,000,000 barrels as of the end of 1947.

Stocks of Crude Petroleum in U. S. by Grades, at end of December

(Based on Weekly Reports of U. S. Bureau of Mines)
(Thousands of Barrels)

GRADE OR ORIGIN	Dec. 27, 1941	Dec. 29, 1945	Dec. 28, 1946	Change 1941-1946	Change 1945-1946
Pennsylvania Grade	3,642	1,923	2,332	— 1,310	+ 409
Other Appalachian	1,427	1,425	1,701	+ 274	+ 276
Lima-Michigan	1,360	1,012	1,076	— 284	+ 64
Illinois-Indiana	18,201	15,759	14,480	— 3,721	— 1,279
Arkansas	2,708	2,566	2,890	+ 182	+ 324
Kansas	7,481	9,611	9,426	+ 1,945	— 185
Louisiana	12,901	13,202	11,745	— 1,156	— 1,457
Northern	4,078	3,492	3,122	— 956	— 370
Gulf Coast	8,823	9,710	8,623	— 200	— 1,087
Mississippi	2,290	2,451	2,294	+ 634	+ 473
New Mexico	6,862	6,164	6,147	— 715	— 17
Oklahoma	51,582	34,137	31,163	—20,419	— 2,974
Texas	82,155	102,763	105,884	+23,729	+ 3,121
East Texas	20,287	17,148	15,930	— 4,357	— 1,218
West Texas	18,682	32,476	39,911	+21,229	+ 7,435
Gulf Coast	24,153	28,008	28,333	+ 4,180	+ 325
Other Texas	19,033	25,131	21,710	+ 2,677	— 3 421
Panhandle	.....	4,479	3,773	.....	— 706
North	.....	6,117	4,992	.....	— 1,125
South	.....	5,907	5,172	.....	— 735
Other	.....	8,628	7,773	.....	— 855
Rocky Mountain	16,095	7,089	10,486	— 5,609	+ 3,397
California	35,083	18,124	21,720	—13,363	+ 3,596
Foreign	2,203	2,692	4,021	+ 1,818	+ 1,329
Total Gasoline Bearing in U.S.	243,990	218,918	225,995	—17,995	+ 7,077
Heavy in California	9,925	4,505	5,631	— 4,294	+ 1,126
Total in U. S.	253,915	223,423	231,626	—22,289	+ 8,203

Distillate Fuel In Line

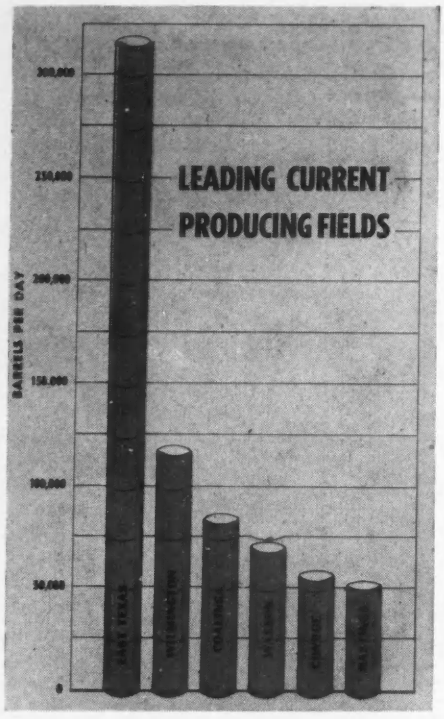
Some anxiety arose over the large build-up in stocks of distillate fuel oil in 1946, as the inventory climbed from 35,778,000 to 58,544,000 barrels. The latter amount, held at the end of 1946, was equivalent to 78 days' supply. This was a large inventory as compared with stocks maintained during the war years, when supplies were inadequate and rationed, but it was not an abnormal situation as compared with prewar years. At the end of 1941 the stocks of distillate fuel oil represented 96 days' supply. Despite the alarm expressed over increasing distillate stocks in 1946, the inventories have not proved seriously out of line with demand, which has constantly increased. A further increase in demand of possibly 8 percent is in prospect for 1947, due to installation of additional oil burning equipment, and stocks of distillate fuel oil at the end of 1947 may be expected to equal or exceed those held at the end of 1946.

Kerosine stocks also were increased sharply in 1946, having climbed from 10,421,000 to 16,996,000 barrels. The latter amount, in storage at the end of 1946, was equivalent to 63 days' supply and that was above normal for either the war period or prewar years. To some extent the comparatively large stocks will be justified, as kerosine demand is expected to show an increase of over 3 percent in 1947. But inventories could be reduced somewhat in 1947 and still be adequate.

Stocks of Major Petroleum Products Held By Refining Companies in the United States at End of December, 1946, Compared with 1941 and 1945

Stocks at refineries, at bulk terminals, in transit, and in pipe lines. Data for 1941 and 1945 from Bureau of Mines monthly reports; for 1946 from weekly reports of American Petroleum Institute.
(THOUSANDS OF BARRELS)

DISTRICT	FINISHED AND UNFINISHED GASOLINE Stocks end of December			KEROSINE			GASOIL AND DISTILLATE FUEL Stocks end of December			RESIDUAL FUEL OIL Stocks end of December		
	1941	1945	1946	1941	1945	1946	1941	1945	1946	1941	1945	1946
East Coast	21,183	19,713	19,912	2,489	3,894	7,910	18,631	10,515	21,332	10,041	7,057	8,882
Appalachian	3,684	4,192	3,485	311	302	481	704	745	649	578	467	496
District No. 1	.....	2,973	2,492	.....	250	438	.....	616	540	.....	308	308
District No. 2	.....	1,219	993	.....	52	43	.....	129	109	.....	159	188
Indiana, Illinois, Kentucky	18,327	20,720	17,343	1,168	1,769	1,691	5,552	5,773	6,104	4,152	2,587	4,144
Oklahoma, Kansas, Missouri	8,875	8,886	9,021	618	583	1,003	1,766	1,839	2,707	2,046	1,024	1,264
Texas Inland	3,288	2,983	3,730	282	237	388	301	362	516	1,349	687	748
Texas Gulf	15,831	17,195	14,517	2,949	1,817	3,064	7,801	6,027	10,482	8,710	5,051	6,749
Louisiana Gulf	3,303	4,843	5,071	513	999	1,352	1,798	1,766	3,713	2,217	1,458	1,996
Arkansas and Louisiana Inland	806	1,888	1,778	213	221	305	341	469	515	368	270	123
Rocky Mountain	1,809	2,056	2,150	129	103	123	319	414	482	535	725	643
District No. 3	.....	96	107	.....	12	15	.....	28	36	.....	41	41
District No. 4	.....	1,960	2,043	.....	91	108	.....	386	446	.....	684	602
California	16,992	15,200	16,912	927	496	679	12,713	7,868	12,054	53,199	17,332	22,604
Total United States	94,098	97,676	93,919	9,599	10,421	16,996	49,926	35,778	58,554	83,195	37,158	47,649



Few Fields Produce Big Daily Volumes

Eighty-three fields with daily output in excess of 10,000 barrels account for half of U. S. oil

AT THE end of 1946 there were eight more fields in the U. S. currently producing in excess of 10,000 barrels daily than 12 months previously. A total of 83 fields had production above 10,000 barrels per day at the close of 1946, compared with 75 at the end of 1945 and with 90 at the end of 1944. The increase in the nation's producing rate undoubtedly was a factor in increasing the number of fields producing large quantities. Daily average production in December, 1946, was 4,702,000 barrels, 234,000 barrels greater than in December, 1945.

These 83 fields were accounting for 2,334,674 barrels daily, or almost exactly half the oil being produced by the nation at the close of the year.

East Texas continued to be the largest producing field by a very substantial margin with 316,000 barrels daily. Next came Wilmington, Calif., with 117,667 barrels daily. These were the only two fields yielding in excess of 100,000 barrels daily, whereas East Texas was the only field a year ago.

Texas and California accounted for all the fields that were producing in excess of 50,000 barrels daily, and for all but one of the 16 fields that were producing in excess of 40,000 barrels daily.

U. S. Fields with Current Output of 10,000 Barrels Daily or More

FIELD	State or District	Year Found	PRODUCTION AT END OF 1946		
			Oil Wells Producing	Bbls. Daily Per Well	Bbls. Daily, Whole Field
Over 100,000 Barrels Daily:					
East Texas	East Texas	1930	23,081	14	316,000
Wilmington	California	1937	1,638	72	117,667
50,000-100,000 Barrels Daily:					
Coalinga	California	1900	1,620	51	83,029
Wasson	West Texas	1936	1,569	44	69,650
Conroe	Texas Gulf Coast	1931	885	60	53,000
Hastings	Texas Gulf Coast	1934	657	78	51,100
40,000-50,000 Barrels Daily:					
Webster	Texas Gulf Coast	1937	207	234	48,500
Huntington Beach	California	1920	877	55	47,899
Slaughter	West Texas	1937	2,039	23	46,000
Keystone	West Texas	1943	586	76	45,575
Ventura Avenue	California	1926	527	85	44,906
Buena Vista Hills	California	1909	973	46	44,850
Edmond, West	Oklahoma	1928	763	57	43,400
Midway-Sunset	California	1900	2,725	16	42,564
Yates	West Texas	1926	573	73	41,800
Tom O'Connor	Lower Tex. Coast	1934	494	81	40,000
30,000-40,000 Barrels Daily:					
Hawkins	East Texas	1940	570	69	39,200
Kettleman N. Dome	California	1928	276	138	37,990
Thompson	Texas Gulf Coast	1931	353	103	36,350
Seeligson	Lower Tex. Coast	1938	556	59	33,000
Santa Maria Valley	California	1934	447	69	30,798
Trapp	Kansas	1939	1,170	26	30,100
25,000-30,000 Barrels Daily:					
Fullerton	West Texas	1942	461	60	27,815
Oklahoma City	Oklahoma	1928	774	35	27,450
McElroy	West Texas	1926	668	40	27,000
T. X. L.	West Texas	1945	141	185	26,100
Delhi-Bigcreek	North Louisiana	1945	291	89	25,900
Anahuac	Texas Gulf Coast	1935	343	73	25,200
Rangely	Colorado	1919	198	127	25,200
20,000-25,000 Barrels Daily:					
Van	East Texas	1929	587	42	24,575
Long Beach	California	1921	1,121	22	24,180
Talco	East Texas	1936	722	33	24,000
Cowden, North	West Texas	1930	661	35	23,300
Goldsmith	West Texas	1935	1,009	22	21,710
Louden	Illinois	1937	1,940	11	21,500
Clay City Cons.	Illinois	1937	1,122	18	20,500
15,000-20,000 Barrels Daily:					
Seminole	West Texas	1937	329	57	18,600
Cole's Levee	California	1938	119	155	18,471
Monument	New Mexico	1935	499	35	17,675
West Ranch	Lower Tex. Coast	1938	446	39	17,500
Foster	West Texas	1936	605	28	17,000
Santa Fe Springs	California	1921	543	31	16,685
Kraft-Prusa	Kansas	1937	487	32	15,825
Salem	Illinois	1938	2,393	65	15,650
Belridge, (N. & S.)	California	1911	797	19	15,384
Bemis-Shutts	Kansas	1935	491	32	15,250
Edison	California	1934	246	62	15,250
Mount Poso	California	1927	508	30	15,233
12,500-15,000 Barrels Daily:					
Dominguez	California	1923	325	46	14,912
Old Ocean	Texas Gulf Coast	1934	142	104	14,750
Coyote, West	California	1934	169	87	14,708
Cranfield	Mississippi	1943	73	201	14,679
Lake St. John	North Louisiana	1942	105	139	14,550
Howard-Glasscock	West Texas	1926	894	16	14,000
Silica	Kansas	1931	719	20	13,950
Cement	Oklahoma	1917	478	29	13,900
Delta Farms	South Louisiana	1940	63	219	13,800
Eunice	New Mexico	1928	477	29	13,750
Heidelberg	Mississippi	1944	126	108	13,569
Willamar	Lower Tex. Coast	1940	195	68	13,300
Rio Bravo	California	1937	85	153	12,986
Magnolia	Arkansas	1938	110	117	12,914
La Fitte	South Louisiana	1935	63	200	12,600
Salt Creek	Wyoming	1908	1,788	7	12,600
10,000-12,500 Barrels Daily:					
Cut Bank	Montana	1931	1,010	12	12,300
Elk Basin	Wyoming	1942	219	56	12,255
Schuler	Arkansas	1937	83	146	12,102
Inglewood	California	1924	294	41	11,979
Lance Creek	Wyoming	1918	234	51	11,975
Brea Olinda	California	1897	356	32	11,402
Smackover	Arkansas	1922	1,536	7	11,365
Vacuum	New Mexico	1928	357	31	11,000
Cymric	California	1945	151	72	10,880
Sand Hills	West Texas	1944	313	36	10,818
Cumberland	Oklahoma	1940	146	74	10,750
Seal Beach	California	1926	165	65	10,693
Greeley	California	1936	99	106	10,506
Brookhaven	Mississippi	1943	27	389	10,500
Stowell-Winnie	Texas Gulf Coast	1941	93	110	10,250
Paradis	South Louisiana	1939	68	147	10,000
Vinton	South Louisiana	1910	113	88	10,000
Agua Dulce	Lower Tex. Coast	1930	190	53	10,000
White Point, East	Lower Tex. Coast	1938	241	41	10,000

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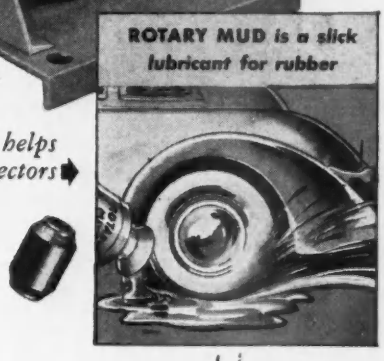

As wells went deeper, better mud control became necessary to guard against the added risk of blow-outs and stuck drill pipe. Failure to build mud up to the right weight and viscosity and hold it to drilling specifications was the cause of many deep well difficulties. To mix mud rapidly and thoroughly was a big job. Patterson-Ballagh's Mud Guns have made this job easier to do well.

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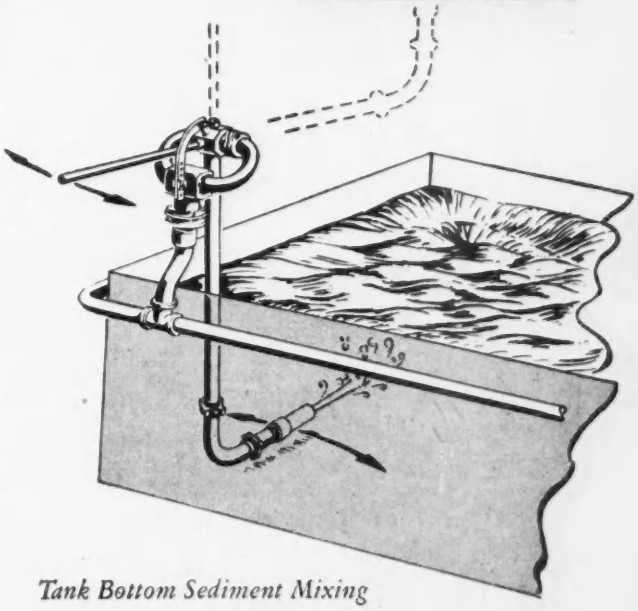
You will find many practical mud service hints in Patterson-Ballagh's booklet No. 200 and in the 1947 Catalog. Write for your free copy today!



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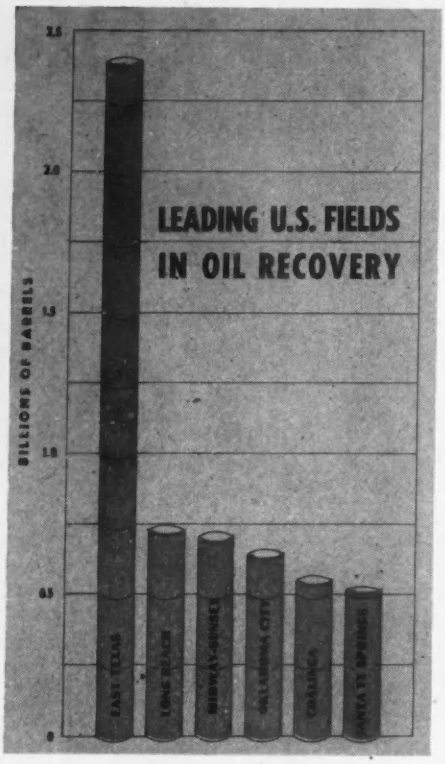

Fifty-Seven Fields Have Had Big Yield

These few big fields have recovered nearly half of all U. S. oil. East Texas yield far largest

IN THE history of United States oil, 57 fields have produced more than 100 million barrels during their lifetime. These same fields account for 15,009,976,625 barrels of the 33,221,649,000 total barrels produced by the country through 1946. Thus they have produced 45 percent of all U. S. oil.

The East Texas field maintains its prestige as the world's foremost producer, having recovered through 1946 a cumulative of 2,357,466,899 barrels of crude since its discovery in 1930. During 1946 it made 120,581,132 barrels of oil, more than four times the amount produced by the next largest producer, Coalinga. Both fields produced slightly less oil than they did in 1945. No field besides East Texas has recovered a billion barrels of oil; it will be many years before another field approaches that record. The 24-year old Long Beach, California, field is nearest to it, with a cumulative of 721,598,105 barrels, but its current production rate is less than 10 million barrels annually.

The ratio of these large fields to states remains the same: California leads with 20 fields which have made 100 million barrels or more with 10 of these having made 200 million barrels or better; Texas is second with 17 fields; Oklahoma third with 13 fields.

Illinois, North Louisiana, and Arkansas each has 2 fields that are big producers, Arkansas' Smackover field being its largest with the nation's seventh highest cumulative of 410,909,322 barrels. The prolific producing region of Kansas, New Mexico and Wyoming still have only a single large producing field apiece. Pennsylvania and South Louisiana, important oil areas, have no fields that have recovered 100 million barrels of oil.

Three new fields surpassed the 100-million mark in 1946: McKittrick field in California, and West Columbia and Mexia of the Upper Texas Coast and East Texas, respectively. Four fields in 1945 passed the 100-million-barrel mark.

The positions of the fields have changed relatively little. Wilmington (California) has stepped up from 16th to 13th place; Louden (Illinois) has gone from 41st to 38th place, as has Hastings (Texas) which is up from 47th to 41st place. Wasson (Texas), which last year was 53rd, made the largest jump and became the 44th ranking producer in 1946.

U. S. Fields That Have Produced Over 100 Million Barrels Each

FIELD	State or District	Year Found	Barrels in 1945	Barrels in 1946	Cumulative Through 1946
No. 1. Field:					
East Texas	East Texas	1930	131,064,282	120,581,132	2,357,466,899
½-¾ Billion Barrels:					
Long Beach	California	1921	9,840,448	9,131,279	721,598,105
Midway-Sunset	California	1900	14,418,492	13,856,172	702,253,671
Oklahoma City	Oklahoma	1928	12,968,085	10,693,405	642,545,568
Coalinga	California	1900	31,798,228	29,353,780	533,293,215
Santa Fe Sp'gs	California	1921	6,274,748	6,140,618	508,980,849
Over 400 Million Barrels:					
Smackover	Arkansas	1922	3,812,706	4,148,025	410,909,322
300-400 Million Barrels:					
Huntington B'ch	California	1920	17,630,629	17,200,833	378,818,045
Cushing	Oklahoma	1912	2,814,150	2,791,885	373,953,649
Buena Vista	California	1909	15,771,357	14,878,713	329,771,239
Kettleman	California	1928	14,366,275	13,863,888	323,923,641
Salt Creek	Wyoming	1908	4,499,355	4,658,130	322,379,277
Wilmington	California	1937	36,340,876	40,397,904	321,845,908
Yates	West Texas	1926	13,391,050	13,555,318	315,255,855
Ventura Ave	California	1926	17,724,974	16,873,073	308,779,731
200-300 Million Barrels:					
Kern River	California	1900	3,542,499	3,609,651	298,202,982
Glenn	Oklahoma	1905	2,359,360	2,418,490	230,722,940
Conroe	Texas Coast	1931	21,368,098	20,702,898	227,235,567
Burbank	Oklahoma	1920	3,127,685	2,926,570	220,959,449
Hendricks	West Texas	1926	1,530,184	1,393,081	210,994,021
Healdton	Oklahoma	1913	2,422,870	2,437,835	203,348,047
150-200 Million Barrels:					
Salem	Illinois	1938	6,637,160	5,966,655	198,192,510
Elk Hills	California	1919	15,809,776	3,708,412	194,764,628
Eldorado	Kansas	1917	2,648,075	2,618,145	192,781,775
Brea Olinda	California	1897	4,193,505	3,967,970	189,484,373
Caddo	Louisiana	1906	1,913,330	1,897,270	173,425,970
Van	East Texas	1929	10,948,396	10,690,367	172,902,779
St. Louis	Oklahoma	1927	1,703,455	1,500,150	168,869,988
150-200 Million Barrles—Con'd					
Domingues	California	1923	6,737,605	5,872,042	167,883,868
McElroy	West Texas	1926	10,852,442	9,784,392	164,548,425
Inglewood	California	1924	5,652,823	4,713,610	156,285,353
Rodessa Total	La.-Tex.Ark.	....	4,178,013	3,365,163	152,994,366
Rodessa	Arkansas	1937	196,952	212,301	7,469,734
Rodessa	N. Louisiana	1935	2,527,625	2,024,655	88,284,515
Rodessa	East Texas	1935	1,453,436	1,128,207	57,240,117
125-150 Million Barrels:					
Coyote, West	California	1934	5,271,152	5,565,080	149,582,847
Montebello	California	1917	3,671,322	3,127,347	146,074,063
Seminole City	Oklahoma	1926	1,339,185	1,306,700	136,919,505
Humble	Texas Coast	1904	817,897	771,924	130,753,923
Earlsboro	Oklahoma	1926	775,625	716,495	129,975,941
Louden	Illinois	1937	9,462,625	8,243,160	129,480,119
Spindletop	Texas Coast	1901	274,745	214,470	128,215,936
Bowlegs	Oklahoma	1926	1,250,490	1,168,730	126,689,726
Hastings	Texas Coast	1934	20,969,315	19,354,870	125,998,741
100-125 Million Barrels:					
Howard-Glasscock	West Texas	1926	4,910,253	4,992,694	123,760,279
Tonkawa	Oklahoma	1921	385,075	396,025	123,663,774
Wasson	West Texas	1936	22,625,154	21,299,421	123,341,618
Torrance	California	1922	3,249,086	3,147,882	120,241,631
Little River	Oklahoma	1927	1,212,895	1,158,875	118,970,077
Powell	East Texas	1900	450,157	440,186	117,737,885
Hobbs	New Mexico	1929	3,796,103	3,570,678	116,193,620
Richfield	California	1919	2,724,300	2,692,169	109,112,387
Big Lake	West Texas	1923	1,399,975	1,271,805	106,631,557
Seal Beach	California	1926	3,424,418	3,712,451	105,758,542
Hewitt	Oklahoma	1919	1,803,830	1,697,615	103,739,168
Fitts	Oklahoma	1933	1,700,900	1,518,400	103,733,956
Hull	Texas Coast	1918	1,448,031	1,220,574	102,251,571
McKittrick	California	1898	2,029,491	1,677,406	101,481,934
West Columbia	Texas Coast	1902	2,612,850	2,369,030	100,891,071
Mexia	East Texas	1916	479,154	467,262	100,409,478

Over 1250 h.p. (3 VU-12's compounded) to make footage contracts pay. Plenty of power to "lug" through heavy overloads, to hoist long strings of drill pipe, to drive big pumps.

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U. S. Imports Highest Since 1922

Trend indicates importation of peak volumes likely, with increase to be in refined oils

IMPORTS of petroleum into the United States during 1946 reached a total of 134,698,000 barrels, setting a new recent high, and fell short of the 1922 all-time record figure of 135,974,000 by only 1,286,000 barrels. Imports during the past year topped the previous year's record topped the production of the East average of 369,000 barrels reaching the country from outside sources. This receipts topped the production of the East Texas field by more than 53,000 barrels per day, or the cargo of a large tanker every other day throughout the year.

This import rate was 100,000 barrels per day greater than in prewar 1941, and was slightly more than twice the annual average brought into the United States since the imposition of tariff charges in 1931.

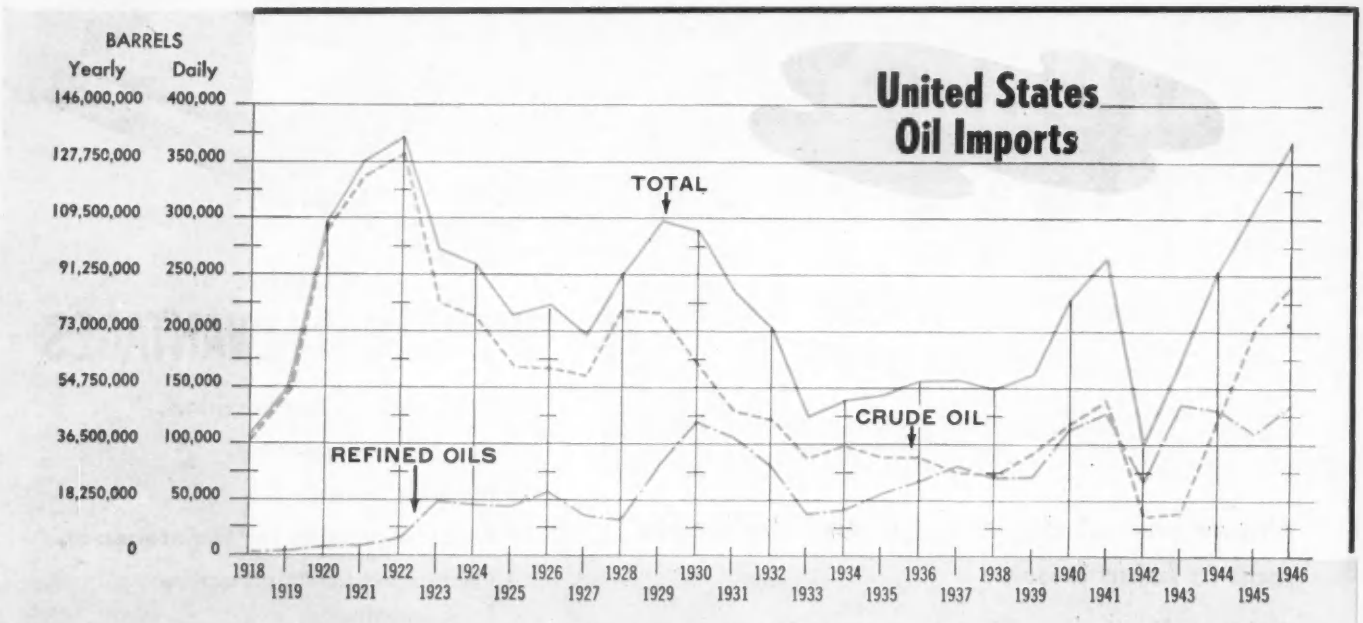
Crude imports during the year totalled 87,053,000 barrels, up 17.5 percent over the previous year's figure of 74,095,000, while refined products totalled 47,645,000 barrels, up 21.3 percent from the 1946 total of 39,278,000 barrels. During 1945, crude represented 65.4 percent of the total imported, while in 1946 only 64.6 percent was crude. The increase was in refined products, indicating augmenting of the previously established trend toward the importation of marketable products rather than raw materials for U. S. refineries.

The daily intake of 369,000 barrels for the year averaged approximately 238,000 barrels of crude and 131,000 barrels of refined products, or close to three tanker cargoes during each of the 365 days of the year to bring in the total of nearly 135 million barrels of petroleum.

The trend of imports since 1922, the record year, shows the development of refining facilities abroad, the crude importation dropping from 130,225,000 barrels that year to the 1946 figure quoted, a decrease of 33.2 percent, while importation of finished products has risen from a 1922 figure of 5,719,000 barrels to the 1946 total of 47,645,000 barrels—an increase of 734 percent during the 24 years which elapsed since setting the previous high record.

In view of the record-breaking figures set during 1946 to import petroleum sufficient to balance demand, it is indicated that 1947 imports will again set a new high, probably topping the 1946 figures by about 25,000 barrels daily. Indication of the sharply increased demand for foreign petroleum—both crude and refined—is reflected by the speed with which "boneyard" tankers are being withdrawn from storage basins and refitted for active sea service.

As in previous years, the bulk of the importation was across the Caribbean, with South American production bulking large in the totals. On these runs, the T-2 tankers with their higher speed and accelerated loading and discharge rates, can compete with slower and less modern tankers despite higher wage rates.



All Figures in Barrels

YEAR	CRUDE OIL Annual Total	CRUDE OIL Daily Average	REFINED PRODUCTS Annual Total	REFINED PRODUCTS Daily Average	TOTAL IMPORTS Annual Total	TOTAL IMPORTS Daily Average
1918....	37,736,000	103,400	1,227,000	3,400	38,963,000	106,800
1919....	52,822,000	144,700	1,376,000	3,800	54,198,000	148,500
1920....	106,175,000	290,100	2,647,000	7,200	108,822,000	297,300
1921....	125,364,000	343,500	3,428,000	9,400	128,792,000	352,900
1922....	130,255,000	356,800	5,719,000	15,700	135,974,000	372,500
1923....	82,015,000	224,700	17,638,000	48,300	99,653,000	273,000
1924....	77,775,000	212,500	16,806,000	45,900	94,581,000	258,400
1925....	61,824,000	169,400	16,376,000	44,900	78,200,000	214,300
1926....	60,382,000	165,400	20,938,000	57,400	81,320,000	222,800
1927....	58,383,000	159,900	13,353,000	36,600	71,736,000	196,500
1928....	79,767,000	218,000	11,790,000	32,200	91,557,000	250,200
1929....	78,933,000	216,200	29,777,000	81,600	108,710,000	297,800
1930....	62,129,000	170,200	43,489,000	119,200	105,618,000	289,400
1931....	47,250,000	129,500	38,837,000	106,400	86,087,000	235,900
1932....	44,682,000	122,100	29,812,000	81,400	74,494,000	203,500
1933....	31,893,000	87,400	13,501,000	37,000	45,394,000	124,400
1934....	35,558,000	97,400	14,936,000	40,900	50,494,000	138,300
1935....	32,239,000	88,300	20,396,000	55,900	52,635,000	144,200
1936....	32,327,000	88,300	24,777,000	67,700	57,104,000	156,000
1937....	27,484,000	75,300	29,673,000	81,300	57,157,000	156,600
1938....	26,412,000	72,400	27,896,000	76,400	54,308,000	148,800
1939....	33,095,000	90,700	25,965,000	71,100	59,060,000	161,800
1940....	42,662,000	116,600	41,089,000	112,200	83,751,000	228,800
1941....	50,606,000	138,700	46,536,000	127,500	97,142,000	266,200
1942....	12,297,000	33,700	23,669,000	64,800	35,966,000	98,500
1943....	13,833,000	37,900	49,579,000	135,800	63,412,000	173,700
1944....	44,805,000	122,400	47,451,000	129,700	92,256,000	252,100
1945....	74,095,000	203,000	39,278,000	107,600	113,373,000	310,600
1946....	87,053,000	238,000	47,645,000	131,000	134,698,000	369,000

Source: U. S. Bureau of Mines, except for latest year, which is estimated by The OIL WEEKLY with aid of Bureau statistics for first 10 months.

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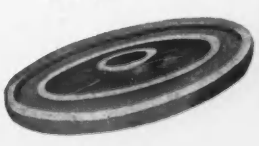
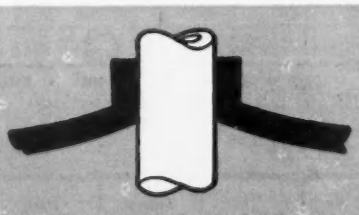
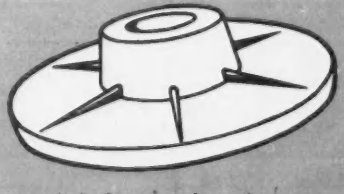
Baroid Wipers are products of our Specialties Department which is devoted entirely to designing and producing new and better tools for the oil industry. Baroid Wipers are sold exclusively through Supply Houses. Write for literature and prices.

TYPE S

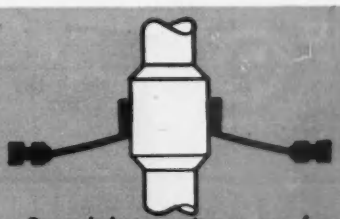




Showing passage of drill pipe through Baroid Wiper. Tapered hole prevents distortion and distributes wear.



Radial ribs strengthen wiper yet allow easy stretch to permit passage of joints and protectors.



Expanded to permit passage of protector on drill pipe. Flexible design makes this easy.

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U. S. Natural Gasoline Production at New High

114,932,000 barrels of natural gasoline and allied products were produced in 1946, an increase of 3¾ million barrels over 1945

U. S. PRODUCTION of natural gasoline and allied products continued its upward trend during 1946 with an all-time high of 315,000 barrels produced daily. This was the 13th consecutive year of increase, and prospects are that another new peak will be established in 1947.

A total of 114,932,000 barrels of natural gasoline and allied products were produced during 1946, an increase of 3.3 percent or nearly 3¾ million barrels over 1945, and in contrast with only 80,855,000 barrels in 1941.

Although the total production in 1946 was the greatest in history, the percentage of increase over 1945 was not as great as during the war period from 1942. In 1944, the annual output was 100,046,000 barrels as compared with 87,716,000 barrels in 1943 and 83,322,000 barrels in 1942.

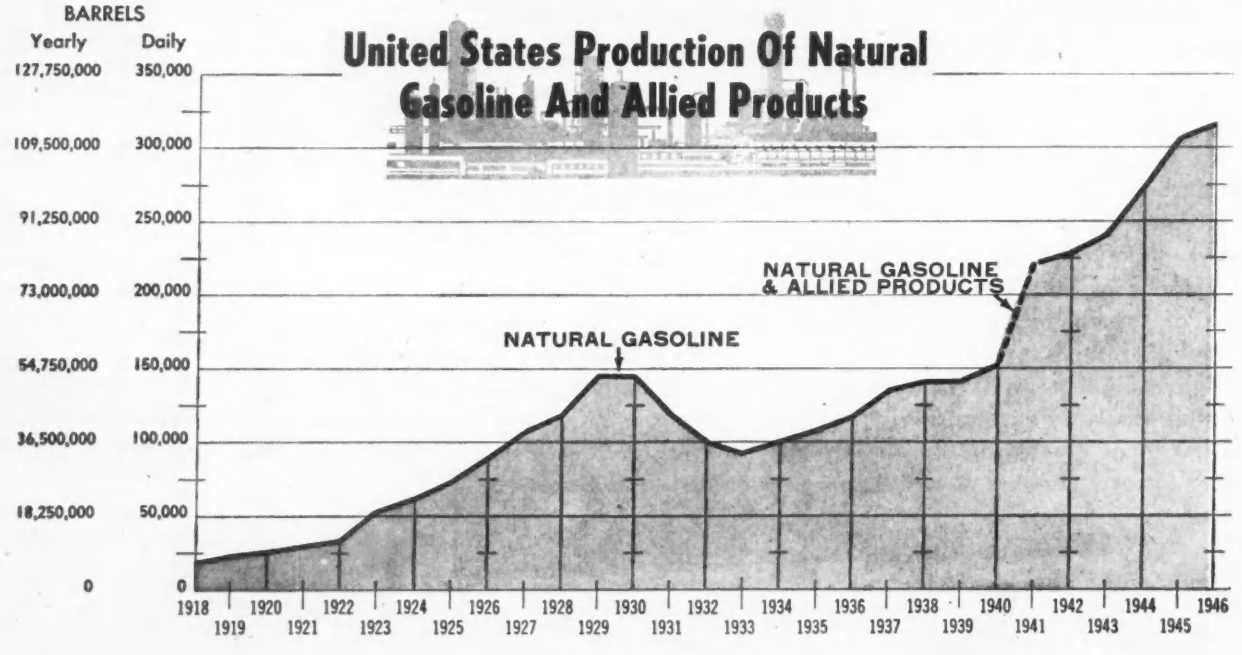
Texas continued to lead all states in production during 1946, producing an average of 149,000 barrels daily as compared with an average of about 143,000 barrels daily in 1945. Annual output for Texas was 54,383,000 barrels.

California, with a daily average output of 59,000 barrels, was the second leading state. This production was up about 1000 barrels daily over 1945. California's total production in 1946 was 21,460,000 barrels.

Louisiana's daily average output soared to 37,000 barrels in 1946 and is expected to rise more in 1947. Oklahoma's daily production was steady at 27,000 barrels.

A major plant construction program launched in 1946 will result in the placing in operation of several plants in 1947, indicating the trend in the output of natural gasoline and allied products. However, the increase may not be as great as in previous years because production of crude probably will not show much gain.

The construction of cycling and gasoline plants as an overall national program to conserve natural gas is being emphasized on the Texas Gulf Coast, West Texas, East Texas and in Louisiana. Several large units in these areas will be placed in operation before the end of 1947. Numerous other plants are scheduled for completion in 1948 indicating the production will continue upward for several years.



(All Figures in Barrels)

YEAR	Annual Production	Daily Average	YEAR	Annual Production	Daily Average	YEAR	Annual Production	Daily Average	YEAR	Annual Production	Daily Average
1918	6,727,000	18,430	1925	26,845,000	73,547	1932	36,281,000	99,400	1939	51,650,000	141,507
1919	8,370,000	22,931	1926	32,455,000	88,917	1933	33,810,000	92,630	1940	55,700,000	152,502
1920	9,161,000	25,098	1927	39,075,000	107,054	1934	36,556,000	100,153	(*) Natural Gasoline and Allied Prod.		
1921	10,713,000	29,350	1928	43,191,000	118,331	1935	39,333,000	107,761	1941	80,855,000	221,520
1922	12,044,000	32,997	1929	53,183,000	145,706	1936	42,770,000	117,178	1942	83,322,000	228,279
1923	19,434,000	53,243	1930	52,631,000	144,194	1937	49,177,000	134,731	1943	87,716,000	240,318
1924	22,235,000	60,197	1931	43,617,000	119,498	1938	51,347,000	140,676	1944	100,046,000	273,350
									1945	111,274,000	305,000
									1946	114,932,000	315,000

* Bureau began a new series covering 1941 and subsequent years, which includes cycle condensate.

Annual natural gasoline production states by states for all years on page 99.

Production of Natural Gasoline and Allied Products, by States, by Years

(Natural Gasoline, Cycle Products, and Liquefied Petroleum Gases)

(THOUSANDS OF GALLONS)

YEAR	Arkansas	California	Colorado	Illinois	Indiana	Kansas	Kentucky	Louisiana	Michigan	Montana	New Mexico
Natural Gasoline:											
1911	.....	50	.....	*145	.....	.....	.....	.....	.....	.....	.....
1912	.....	1,041	.....	*290	.....	.....	.....	.....	.....	.....	.....
1913	.....	3,461	.....	*581	.....	*2	.....	.....	.....	.....	.....
1914	.....	7,581	.....	1,164	.....	*8	.....	.....	.....	.....	.....
1915	.....	12,835	.....	1,035	.....	*40	.....	210	.....	.....	.....
1916	.....	17,159	.....	2,260	.....	215	725	2,113	.....	.....	.....
1917	.....	28,818	.....	4,934	.....	1,175	3,818	4,980	.....	.....	.....
1918	.....	32,269	2	4,575	.....	2,390	3,331	7,021	.....	.....	.....
1919	.....	40,386	.....	6,060	.....	3,284	5,136	10,063	.....	.....	.....
1920	.....	48,208	.....	6,055	.....	4,331	4,497	10,610	.....	.....	.....
1921	.....	58,220	.....	7,536	.....	3,587	4,242	15,341	.....	.....	.....
1922	4,289	67,120	.....	7,760	.....	2,856	5,205	29,406	.....	.....	.....
1923	16,183	173,329	.....	7,356	.....	8,775	7,601	40,720	.....	.....	.....
1924	17,533	232,579	.....	9,091	.....	11,658	7,274	48,098	.....	.....	.....
1925	19,686	303,180	35	9,874	.....	19,592	7,685	43,489	.....	.....	.....
1926	30,385	389,366	276	9,987	.....	25,369	7,689	43,557	.....	.....	1,488
1927	37,498	498,020	912	8,853	.....	36,095	7,480	44,844	.....	.....	1,827
1928	32 677	584,111	1,909	7,817	.....	36,765	7,267	55,022	.....	.....	1,506
1929	33,455	840,325	1,630	7,080	2	36,227	6,006	64,957	.....	.....	1,077
1930	30,637	829,713	1,322	6,867	2	35,106	6,641	73,693	.....	.....	3,663
1931	26,282	680,399	659	5,024	1	32,690	5,464	58,034	.....	.....	17,775
1932	18,653	551,897	472	4,558	1	24,792	4,877	46,199	.....	.....	17,507
1933	15,215	496,293	408	3,673	.....	24,869	4,514	36,973	188	1,295	19,149
1934	13,033	506,272	643	3,810	.....	27,891	4,171	40,558	589	1,237	21,748
1935	13,076	534,624	417	2,642	.....	32,507	5,614	49,732	1,850	1,739	19,563
1936	11,957	593,416	451	2,337	.....	37,775	6,009	72,687	2,015	2,071	28,921
1937	11,285	623,894	404	2,567	.....	57,026	7,344	106,415	2,408	2,296	38,253
1938	25,648	660,890	386	2,436	.....	55,988	7,040	95,634	3,581	1,768	49,596
1939	24,634	607,237	390	4,012	.....	62,175	7,785	94,090	2,971	2,161	54,707
1940	32,096	587,476	380	21,499	.....	64,691	9,539	113,741	3,919	2,603	55,713
1941	28,108	577,127	390	54,872	.....	72,876	10,247	201,049	5,670	2,517	69,115
Cumulative	442,330	10,587,236	11,086	216,750	6	720,755	157,201	1,409,236	23,191	17,687	401,608
Natural Gasoline and Allied Products:											
1941	34,389	659,765	390	93,165	.....	85,691	35,371	225,724	5,670	3,966	81,000
1942	42,677	633,326	346	139,323	.....	81,828	36,682	296,074	2,518	4,517	89,164
1943	56,837	693,332	†	185,487	.....	85,206	43,317	306,062	1,226	4,664	81,005
1944	75,536	771,280	†	194,369	.....	69,834	48,742	492,659	8,500	4,768	81,161
1945	84,401	889,473	†	175,916	.....	73,300	47,437	548,902	13,461	4,899	97,799
1946, Total	**83,351**	**901,329**	†	**162,753**	.....	**83,360**	**53,288**	**563,634**	**13,150**	**4,504**	**103,243**
(Daily Average)	228	2,469	†	446	.....	228	146	1,544	36	12	283
1946, Thousand Barrels	1,984	21,460	†	3,875	.....	1,985	1,269	13,420	313	107	2,458
(Daily Average)	5	59	†	11	.....	5	4	37	1	.....	7

YEAR	New York	Ohio	Oklahoma	Penn-sylvania	Texas	West Virginia	Wyoming	Others	Total	VALUE AT PLANTS: Thou-sands of Dollars	VALUE AT PLANTS: Av. Per Gallon (Cents)
Natural Gasoline:											
1911	.....	1,679	388	1,467	.....	3,660	.....	37	7,426	$ 532	7.2
1912	.....	1,719	1,575	2,041	.....	5,318	.....	97	12,081	1,157	9.6
1913	.....	2,073	6,463	3,680	.....	7,662	.....	139	24,061	2,458	10.2
1914	.....	2,440	17,278	4,612	.....	9,278	.....	292	42,653	3,106	7.3
1915	.....	2,199	31,666	5,899	*130	10,854	.....	497	65,365	5,151	7.9
1916	249	2,639	48,360	9,715	1,293	18,765	.....	.....	103,493	14,331	13.8
1917	181	5,440	115,123	13,826	6,920	32,669	.....	.....	217,884	40,189	18.4
1918	218	6,745	163,701	15,775	7,326	37,604	1,579	.....	282,536	50,364	17.8
1919	458	8,801	189,995	20,284	9,337	52,150	5,581	.....	351,535	64,197	18.3
1920	411	10,016	178,857	21,151	32,956	58,941	8,711	.....	384,744	71,788	18.7
1921	366	9,100	185,341	19,856	77,141	54,646	14,558	.....	449,934	61,815	13.7
1922	506	8,600	189,404	18,518	95,405	56,796	19,967	.....	505,832	72,711	14.4
1923	408	10,035	270,249	19,132	177,765	63,381	21,292	.....	816,226	77,268	9.5
1924	477	9,443	301,062	19,254	186,571	61,549	29,272	.....	933,861	82,233	8.8
1925	414	8,701	390,861	18,850	214,092	58,201	32,777	33	1,127,470	120,383	10.7
1926	539	10,817	475,716	20,343	243,093	63,807	40,625	33	1 363,090	136,412	10.0
1927	449	12,167	548,109	16,744	320,723	64,192	43,212	19	1,641,144	118,688	7.2
1928	392	13,174	619,691	16,571	324,516	69,729	42,861	26	1,814,034	138,944	7.7
1929	264	11,166	676,030	18,411	419,485	72,944	44,544	35	2,233,688	158,410	7.1
1930	208	8,937	591,194	16,713	491,299	63,328	51,132	39	2,210,494	128,160	5.8
1931	132	5,199	454,886	14,339	426,695	52,844	51,523	32	1,831,918	63,732	3.5
1932	117	5,163	378,584	11,685	371,106	43,773	44,391	25	1,523,800	49,244	3.2
1933	96	4,662	360,488	11,686	366,515	39,848	34,103	25	1,420,000	54,368	3.8
1934	85	5,881	355,438	10,781	466,570	41,854	34,799	.....	1,535,360	60,523	3.9
1935	27	6,232	379,913	12,623	516,748	42,433	32,246	.....	1,651,986	70,940	4.3
1936	22	6,991	418,591	14,267	520,547	44,389	33,894	.....	1,796,340	84,572	4.7
1937	33	7,704	492,290	13,940	615,281	50,379	33,915	.....	2,065,434	97,125	4.7
1938	27	7,382	468,499	10,734	685,920	50,398	30,647	.....	2,156,574	87,266	4.0
1939	34	7,445	436,123	11,756	770,047	52,272	31,461	.....	2,169,300	90,050	4.2
1940	17	8,062	399,369	15,371	932,040	58,782	34,102	.....	2,339,400	68,261	2.9
1941	17	8,217	362,247	15,440	1,180,221	65,873	34,728	.....	2,688,714	105,815	3.9
Cumulative	6,147	218,829	9,507,491	425,464	9,459,742	1,408,369	751,920	1,329	35,766,377	$2,180,193	....
Natural Gasoline and Allied Products:											
1941	17	8,217	453,383	16,011	1,558,819	98,044	36,288	.....	3,395,910	.....	.....
1942	15	6,975	445,115	15,294	1,567,830	101,828	36,012	.....	3,499,524	.....	....
1943	12	6,495	422,313	17,534	1,646,031	97,942	†36,609	.....	3,684,072	.....	....
1944	12	7,282	421,768	17,495	1,870,419	88,917	†49,190	.....	4,201,932	.....	....
1945	5	6,496	416,849	14,291	2,159,000	90,661	†50,617	.....	4,673,507	.....	....
1946 Total	**5**	**5,881**	**418,905**	**10,367**	**2,284,108**	**96,040**	**†43,248**	.....	**4,827,166**	.....	....
(Daily Average)	.....	16	1,148	29	6,258	263	†119	.....	13,225	.....	....
1946, Thousand Barrels	.....	140	9,974	247	54,383	2,287	†1,030	.....	114,932	.....	....
(Daily Average)	.....	...	27	1	149	6	†3	.....	315	.....	....

* Estimated † Wyoming includes Colorado drip gasoline.

Peak Natural Gas Output Is Forerunner of Further Gain

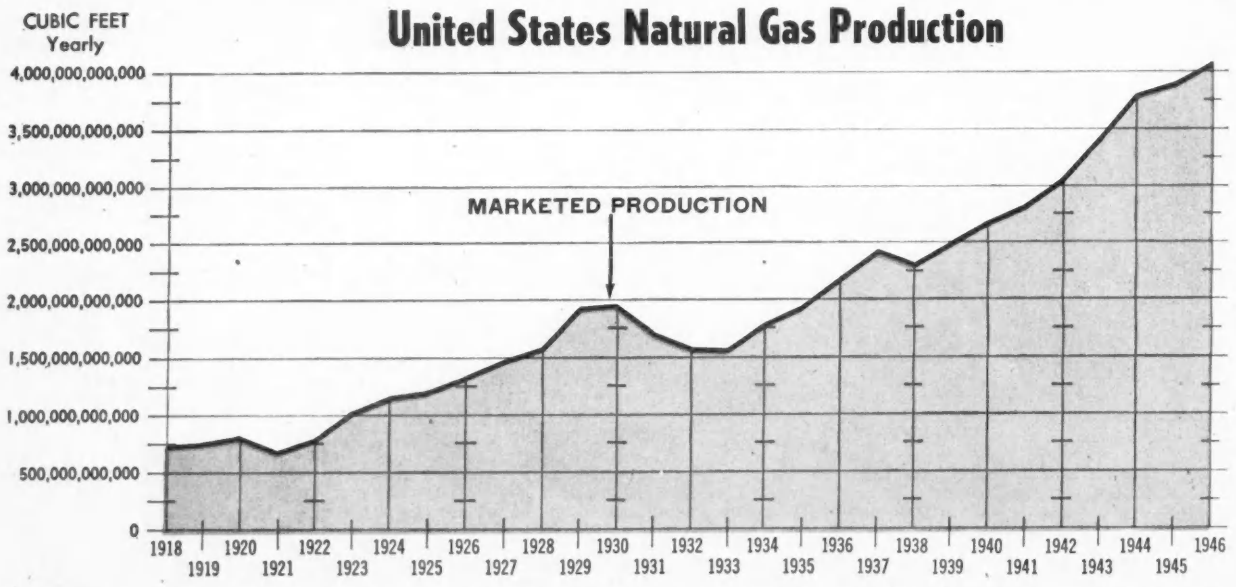
Over four trillion cubic feet marketed for first time in history, and future expansion is assured by plans for building many new pipe line systems

THE natural gas industry of the United States continued its remarkable expansion during 1946, marketed production reaching another new all-time peak as it responded to swiftly expanding consumption. For the first time in history, marketed production for a single year exceeded 4 trillion cubic feet.

Preliminary figures indicate 4040 billion cubic feet of natural gas were marketed the past year, an average of better than 11 billion cubic feet daily. The year's total represented a gain of 165 billion cubic feet over the peak of 3875 billion marketed in 1945, and twice the volume produced as recently as 1935.

Further growth in marketed natural gas is assured, as the nation is on the threshold of an enormous expansion in large-diameter natural gas pipe line systems. At the beginning of the year, the Federal Power Commission had approved the construction of 4985 miles of new natural gas lines with a capacity of 1¾ billion cubic feet daily. Much of this capacity will not be placed in operation until after 1947; nevertheless, output in recent months indicates a new peak in marketed production is certain. Greater details on pipe line prospects are published in an article in this issue devoted to pipe line construction activity.

Economic conditions indicate that the vigorous growth of the country's natural gas carrier systems, and therefore volumes marketed, should continue for several years to come. The competitive cost position of natural gas has improved each time the coal industry has suffered strikes and higher wages. This is borne out by the large number of applications for additional new gas lines pending before FPC. These unacted upon applications have a combined capacity of another 1½ billion cubic feet daily. Furthermore, chemical processing of the constituents of natural gas emerged during the war from comparative obscurity to a prominent role in a number of industries. Although the volume consumed in such work has increased rapidly since 1941, they have not meant much to gas producers because only very small quantities of natural gas are utilized. From the standpoint of the producer the most important chemical developments undoubtedly are those that make possible



YEAR	Number of Producing Wells	Marketed Production (Millions of Cubic Feet)	YEAR	Number of Producing Wells	Marketed Production (Millions of Cubic Feet)	YEAR	Number of Producing Wells	Marketed Production (Millions of Cubic Feet)	YEAR	Number of Producing Wells	Marketed Production (Millions of Cubic Feet)
1918	•40,369	721,001	1926	•49,900	1,313,019	1934	54,130	1,770,721	1941	55,500	2,812,658
1919	•41,500	745,916	1927	•51,100	1,445,428	1935	53,700	1,916,595	1942	56,150	3,053,475
1920	•42,700	798,210	1928	•52,300	1,568,139	1936	53,960	2,167,802	1943	57,200	3,414,689
1921	•43,900	662,052	1929	53,545	1,917,693	1937	55,050	3,407,620	1944	n.a.	3,780,232
1922	•45,100	762,546	1930	55,020	1,943,421	1938	53,770	2,295,562	1945	n.a.	•3,875,172
1923	•46,300	1,006,976	1931	55,756	1,656,436	1939	53,530	2,476,756	1946	n.a.	•4,040,000
1924	•47,500	1,141,521	1932	54,160	1,555,990	1940	53,880	2,660,222			
1925	•48,700	1,188,571	1933	53,660	1,555,474						

Source: U. S. Bureau of Mines. Includes only dry natural gas producing wells. • Indicates figure estimated. n.a. means data not available.

the conversion of methane into motor fuel and other useful products. The first such commercial scale plant for the United States now is being built near Brownsville, Texas. This and similar processes may provide a profit motive for the conservation of natural gas by opening important new markets.

Government action that would be unfavorable to the operation of the industry appears to be the only possible development that would retard or prevent the further expansion of natural gas distribution.

There are current efforts to restrict the transportation of natural gas from several southwestern producing states to other states. If successful, natural gas expansion would be held back.

At the same time, the FPC has been steadily widening its regulatory scope over the industry. Since May 8, 1942, it has been necessary to obtain authorization from the FPC before building new lines, and there have been fundamental changes in the methods and concepts of utility rate regulation. During 1945 and 1946, the FPC conducted an investigation of the conservation and utilization of natural gas, involving studies of reserves types of use, competition with other fuels, prices, and related matters.

The debate of the many controversial issues caused conservation, especially as regards the long term program of producing with less waste, to become a matter of paramount consideration.

Reserves Are Large

Despite the recent rapid growth in production, the proved reserves of natural gas appear adequate for all needs for many years to come. These reserves in the United States as of January 1, 1946, were placed at almost 148 trillion cubic feet by the reserve committee of the American Gas Association. This figure includes free dry gas and gas in oil producing reservoirs. These are the latest gas reserves figures available at the moment. However, this committee has been organized similar to the American Petroleum Institute's Crude Reserve Committee and henceforth will issue new natural gas reserve figures annually. The report for January 1, 1947, is expected to be made public within a few months.

Of the estimated 148 trillion cubic feet of proved natural gas reserves, 78 trillion cubic feet, or better than half, are located in Texas. Thus, this state occupies a position in the natural gas picture similar to that it holds in crude oil production and reserves. Second ranking natural gas reserve state is Louisiana with slightly less than 20 trillion cubic feet, followed by Kansas with 13¼ trillion cubic feet, and Oklahoma and Pennsylvania with better than 10 trillion cubic feet each.

However, some sections of the country do not have adequate reserves. It has become necessary to supplement the Eastern supply with additional quantities shipped from the Southwest, and now a gas line is being built from Texas to California to assure the West Coast of an adequate supply. These developments have furnished larger and needed markets for Texas, Oklahoma and Kansas gas, especially the first named state.

Texas is the largest gas producing state, followed by Louisiana, California, Oklahoma, West Virginia and then Kansas.

During the first ten months of 1946, latest period for statistics by states, the Interstate Oil Compact Commission credits Texas with the production of 1284 billion cubic feet of gas, including 500 billion for dry natural gas and a similar quantity for oil well gas.

Louisiana, according to the same source, produced 621 billion cubic feet during the first ten months of the year. California achieved its third place position with a production of 451 billion cubic feet, or one third that of Texas.

Natural gas production statistics by states for all years on page 102.

Statistical Difficulties

Statistics on United States production of natural gas are far below the efficient level of reports on other phases of the petroleum industry. For example, the U. S. Bureau of Mines is just now preparing to release final figures on production by states for the year 1944. The best published source for current information on natural gas production is that of the Interstate Oil Compact Commission, which unfortunately does not cover all the states and runs a couple of months behind.

Undoubtedly, this is due in large part to the heretofore lack of widespread interest in natural gas data. Now that natural gas is assuming a more dominating role, there is an urgent need for better and quick information on operations. The situation is receiving considerable study, and a substantial improvement is to be expected. Therefore, better statistical data on natural gas is probable.

Natural Gas Production Leading States During First 10 Months of 1946

(Millions of Cubic Feet)

STATE	Dry Natural Gas	Sour Gas	Oil Well Gas	Total Gas
Arkansas	3,207	32,849	42,247	78,303
California	143,557	.....	307,661	451,218
Colorado	4,844	.....	13,416	18,260
Indiana	5,596	.....	n.a	5,596
Kansas	97,617	.....	n.a	97,617
Louisiana	490,296	.....	131,453	621,749
Michigan	15,267	.....	3,483	18,750
Mississippi	555	.....	9,838	10,393
Montana	30,232	.....	n.a.	30,232
New Mexico	20,397	.....	86,183	106,580
Oklahoma	186,809	.....	135,757	322,566
Texas	500,485	228,733	554,810	1,284,028
West Virginia	158,459	.....	n.a.	158,459
Total	1,657,321	261,582	1,284,848	3,203,751

SOURCE: Interstate Oil Compact Commission Monthly Statistical Reports. n.a. means data not available. Production figures for various states are not on same pressure base. The following natural gas pressure bases apply: Arkansas 14.4 p.s.i. plus 4 oz.; California 14.73 p.s.i.; Kansas 2 pounds; Louisiana 14.4 plus 10 oz.; Michigan 10 oz.; Mississippi 15.025 p.s.i.; New Mexico 14.4 plus 10 oz.; Oklahoma 14.65 p.s.i.; Texas 14.65; West Virginia 14.9 p.s.i.

Estimated Proved Recoverable Natural Gas Reserves in the United States As of January 1, 1946

(In Millions of Cubic Feet)

STATES	Non-Associated[1]	Associated[2]	Dissolved[3]	Total
Alabama	.....	.....	23	23
Arkansas	494,866	149,471	225,349	869,686
California	3,653,704	3,091,952	4,110,051	10,855,707
Colorado	158,422	126,783	111,077	396,282
Florida	.....	.....	6	6
Illinois	3,000	55,000	210,000	268,000
Indiana	4,000	8,000	5,000	17,000
Kansas	12,825,868	218,984	205,753	13,250,605
Kentucky	1,336,800	.....	100,000	1,436,800
Louisiana	16,043,932	2,650,000	1,154,600	19,849,393
Michigan	5,431	.....	3,500	8,931
Mississippi	1,621,382	270,332	116,145	2,007,859
Missouri	10	.....	60	70
Montana	1,202,521	.....	.....	1,202,521
Nebraska	.....	.....	375	375
New Mexico	2,680,133	1,930,300	579,876	5,190,309
New York	75,000	.....	1,000	76,000
Ohio	581,800	.....	45,000	626,800
Oklahoma	7,716,351	1,138,767	1,224,820	10,079,938
Pennsylvania	465,000	.....	55,000	520,000
Texas	59,381,205	10,316,402	8,609,069	78,306,676
Utah	81,323	.....	.....	81,323
West Virginia	1,818,300	.....	110,000	1,928,300
Wyoming	565,306	164,507	86,950	816,763
Total	110,714,354	20,121,359	16,953,654	147,789,367

Notes: Volumes are reported at a pressure base of 14.65 pounds per square inch, absolute, and at a standard temperature of 60° F.

[1] "Non-Associated" includes all free gas not in contact with crude oil in the reservoir.

[2] "Associated" includes all free gas in immediate contact with crude oil in reservoir.

[3] "Dissolved" includes all gas in solution in crude oil in the reservoir. The estimates for this gas were based on the figures of the API Committee on Petroleum Reserves and were estimated jointly by the AGA and the API reserves committees.

Source: American Gas Association Committee on Natural Gas Reserves.

United States Marketed Production of Natural Gas, By States, By Years

(Millions of Cubic Feet)

Sources: U. S. Bureau of Mines, except for some figures for early years which are from "Petroleum in the United States and Possessions" by Ralph Arnold and William J. Kemnitzer, and except where otherwise indicated by footnotes.

YEAR	Arkansas	California	Colorado	Illinois	Indiana	Kansas	Kentucky	Louisiana	Michigan	Mississippi	Montana	New Mexico
•Pre-1906	281	9,810	631	1,505	471,800	81,865	13,243	31	.....	.....	.....	.....
1906	21	153	23	410	7,861	69,323	789	39	.....	.....	.....	.....
1907	•570	230	57	1,155	6,624	76,707	1,303	88	.....	.....	.....	.....
1908	•1,208	479	50	4,979	5,256	80,740	1,430	252	.....	.....	.....	.....
1909	•1,778	2,324	•45	8,473	6,159	75,074	2,097	1,365	1	.....	.....	.....
1910	•2,412	2,764	•40	6,723	5,760	59,380	1,357	4,110	1	.....	.....	.....
1911	•1,994	6,390	•35	6,762	4,365	38,800	1,275	9,786	2	.....	.....	.....
1912	•1,465	9,355	•30	5,603	3,618	28,068	1,951	14,493	2	.....	.....	.....
1913	•806	11,035	•27	4,767	2,921	22,884	1,821	26,653	2	.....	.....	.....
1914	•633	17,829	•24	3,548	2,580	22,628	1,422	26,775	2	.....	.....	.....
1915	992	21,891	•21	2,690	2,261	27,046	1,667	25,540	2	.....	6	.....
1916	2,388	31,643	•18	3,534	1,715	31,710	2,107	32,081	1	.....	213	.....
1917	5,610	49,427	•14	4,439	1,712	24,439	2,802	31,287	1	.....	334	.....
1918	5,295	39,719	10	4,473	1,667	27,825	3,022	36,094	1	.....	177	.....
1919	5,587	55,607	10	3,825	1,407	16,150	2,057	47,062	1	.....	858	.....
1920	9,027	66,041	8	3,013	1,779	21,158	3,345	58,274	.....	.....	818	.....
1921	4,260	75,942	4	2,646	1,066	15,717	4,820	58,004	.....	.....	336	.....
1922	9,700	84,580	4	3,383	947	20,289	5,872	70,267	1	.....	486	.....
1923	24,215	131,434	1	4,049	880	30,913	11,953	112,031	1	.....	1,470	.....
1924	36,616	189,692	48	4,072	998	25,580	12,875	160,945	1	.....	1,071	.....
1925	41,878	187,789	574	4,165	1,168	26,917	10,770	152,620	.....	.....	1,496	.....
1926	43,566	204,915	554	3,808	901	38,095	10,410	157,423	.....	.....	2,283	921
1927	30,450	212,314	1,725	3,741	1,124	42,646	10,206	186,961	1	.....	4,253	1,019
1928	20,235	246,215	2,931	3,051	1,290	45,644	15,383	227,821	469	.....	6,277	838
1929	19,928	342,214	2,787	2,983	1,012	38,469	27,588	261,138	4,526	90	9,659	3,054
1930	18,585	334,789	3,312	2,890	1,217	37,630	28,023	278,341	2,075	179	10,060	9,497
1931	13,300	305,930	2,536	2,130	1,337	38,742	27,870	224,155	472	6,048	10,949	19,354
1932	10,235	263,484	2,547	1,769	1,349	40,690	29,005	201,561	968	8,648	13,295	17,604
1933	8,288	259,799	2,449	1,631	1,544	41,596	31,380	197,826	1,528	8,679	14,391	19,148
1934	7,024	268,122	2,633	1,868	1,802	46,909	33,124	225,713	2,789	8,245	14,971	24,075
1935	6,167	284,109	2,843	1,448	1,777	57,125	39,738	249,450	4,203	9,643	19,870	27,931
1936	8,500	320,406	3,687	865	2,241	69,178	43,903	290,151	7,167	11,821	23,003	33,928
1937	9,690	329,769	3,186	1,040	1,551	83,890	55,719	315,301	9,080	13,348	24,765	46,337
1938	11,301	315,168	1,904	1,169	1,299	75,203	46,163	283,899	10,165	13,656	21,216	50,706
1939	10,107	348,361	2,015	2,746	791	80,556	47,771	294,370	10,726	14,527	23,178	60,284
1940	14,379	351,950	2,533	8,359	1,137	90,003	53,056	343,191	12,648	6,365	26,231	63,990
1941	19,148	374,905	3,256	10,053	1,522	111,121	69,067	403,855	13,916	4,268	28,499	64,655
1942	19,456	403,968	4,865	14,484	1,599	112,921	80,089	447,686	15,521	2,082	31,475	78,164
1943	36,469	457,757	6,445	18,120	1,450	133,729	92,364	505,294	18,006	1,461	31,562	86,500
1944	n. a.	▷530,000	n. a.	n. a.	n. a.	n. a.	n. a.	▷615,000	n. a.	n. a.	n. a.	n. a.
1945	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
1946	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
Total	463,564	7,148,359	53,882	166,369	557,487	2,007,360	828,837	6,576,933	142,279	109,060	323,202	608,005

	New York	Ohio	Oklahoma	Pennsylvania	Texas	West Virginia	Wyoming	Others	Total United States	VALUE AT POINTS OF CONSUMPTION: Total (Thousands of Dollars)	VALUE AT POINTS OF CONSUMPTION: Average Per M Cubic Ft. (Cts.)
•Pre-1906	31,340	305,593	2,215	1,611,066	815	387,799	506	43,281	**2,961,781**	$426,448	14.4
1906	2,548	45,436	3,520	138,161	•1,000	119,400	•100	59	**388,843**	46,874	12.1
1907	3,288	52,041	4,867	135,516	•1,200	122,687	•140	149	**406,622**	54,222	13.3
1908	3,843	47,442	11,925	130,476	•1,500	112,181	•180	200	**402,141**	54,640	13.6
1909	4,696	53,223	28,037	127,607	•3,000	166,435	•220	82	**480,706**	63,207	13.1
1910	6,010	48,232	50,430	126,867	•4,000	190,706	•253	109	**509,155**	70,756	13.9
1911	5,240	49,450	67,276	108,869	5,503	206,891	•265	90	**512,993**	74,622	14.5
1912	8,626	56,210	73,799	112,150	7,470	239,007	•247	109	**562,203**	84,564	15.0
1913	8,515	50,612	75,018	118,860	12,160	245,454	•273	90	**581,898**	87,847	15.1
1914	8,935	68,270	78,167	110,745	13,434	236,489	•306	80	**591,867**	94,116	15.9
1915	7,977	79,510	87,517	113,692	13,324	244,004	•321	118	**628,579**	101,312	16.1
1916	8,036	69,888	123,517	130,484	15,810	299,319	•557	149	**753,170**	120,227	16.0
1917	8,372	68,917	137,384	133,397	17,047	308,617	•1,209	102	**795,110**	142,089	17.9
1918	8,461	61,261	124,317	123,813	13,440	265,161	4,339	1,926	**721,001**	153,554	21.3
1919	8,124	63,153	163,649	113,489	24,710	234,095	6,014	118	**745,916**	160,888	21.6
1920	8,419	58,938	154,467	125,787	37,063	239,719	10,312	42	**798,210**	196,194	24.6
1921	6,583	47,412	124,058	86,144	44,504	174,921	15,608	27	**662,052**	174,617	26.4
1922	6,947	51,481	140,631	101,276	47,945	195,288	23,427	22	**762,516**	221,535	29.1
1923	6,497	53,812	203,082	112,562	74,535	203,867	35,523	151	**1,006,976**	240,001	23.8
1924	6,196	47,396	214,452	105,863	107,247	182,285	46,036	148	**1,141,521**	253,856	22.2
1925	6,210	43,235	249,285	101,632	134,872	180,345	45,539	76	**1,188,571**	265,271	22.3
1926	7,027	47,363	286,421	107,089	175,392	180,223	46,567	61	**1,313,019**	300,168	22.9
1927	5,908	51,381	326,864	105,709	254,063	162,375	43,582	1,056	**1,445,428**	317,930	22.0
1928	7,224	56,341	320,861	99,466	301,990	163,018	47,490	1,595	**1,568,139**	363,726	23.2
1929	8,387	57,936	357,893	101,951	464,928	167,333	44,648	1,169	**1,917,693**	413,276	21.6
1930	9,624	63,394	348,116	88,706	517,880	144,180	43,219	1,704	**1,943,421**	416,090	21.4
1931	7,868	56,326	263,685	74,797	464,580	124,797	39,770	1,790	**1,686,436**	392,816	23.3
1932	8,813	51,466	255,487	61,611	456,832	100,540	28,938	1,148	**1,555,990**	384,632	24.7
1933	6,865	47,929	245,759	63,579	475,691	101,653	25,830	909	**1,555,474**	368,540	23.7
1934	6,278	50,330	254,457	86,238	602,976	109,161	23,148	858	**1,770,721**	395,378	22.3
1935	8,288	49,592	274,313	94,464	642,366	115,772	26,643	853	**1,916,595**	428,074	22.4
1936	12,431	46,994	280,481	110,362	734,561	138,076	29,322	725	**2,167,802**	475,439	22.0
1937	21,325	42,783	296,260	115,928	854,531	149,084	31,023	2,980	**2,407,620**	527,529	21.9
1938	39,402	35,257	263,164	76,547	882,473	134,342	26,678	5,850	**2,295,562**	500,550	21.8
1939	29,222	36,469	250,875	93,882	979,427	159,226	26,614	5,609	**2,476,756**	533,721	21.6
1940	12,187	40,639	257,626	90,725	1,063,538	188,751	27,346	5,568	**2,660,222**	577,004	21.7
1941	10,456	41,858	234,054	92,819	1,086,312	207,681	29,284	5,929	**2,812,658**	620,038	22.1
1942	8,718	45,055	269,704	93,532	1,170,345	215,193	33,124	5,494	**3,053,475**	691,167	22.7
1943	8,062	52,001	285,045	93,543	1,323,885	223,787	34,351	4,858	**3,414,689**	758,937	22.3
1944	n. a.	n. a.	▷315,000	n. a.	▷1,460,000	▷209,000	n. a.	▷660,232	**▷3,780,232**	821,310	21.8
1945	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	**▷3,875,172**	n. a.	n. a.
1946	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	**▷4,040,000**	▷835,000	20.7
Total	382,948	2,294,626	7,503,678	5,619,494	14,492,379	7,538,862	798,952	715,517	**66,558,965**	.....	.....

• Indicates figures are estimates. ▷ Indicates figures are preliminary and subject to revision. n. a. means not available. Bureau has not yet released figures that break national totals for recent years into state figures.

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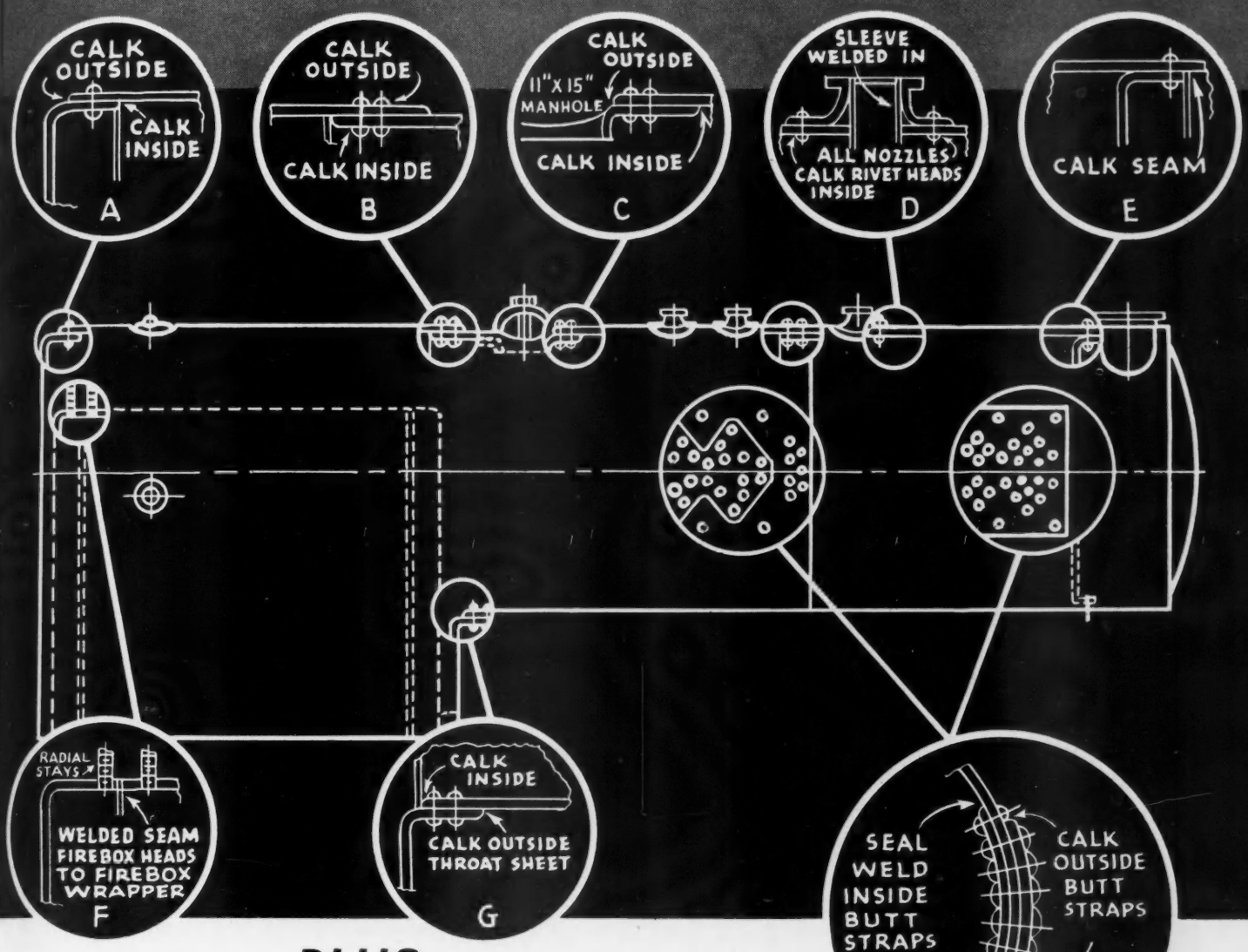

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Refinery Operations Break Peak Reached

Failure of predicted postwar decline to occur makes outlook favorable for further increase in plant activities

CONFRONTED with an enormous demand, United States refining plants processed a greater volume of crude and turned out larger quantities of products during 1946 than ever before. It was the fourth consecutive year that the nation's refining operations were boosted to all-time peaks. With increased demand forecast for 1947, U. S. refineries should again process record volumes during the current year.

During 1946 a total of 1,731,458,000 barrels (4,711,000 barrels daily) were stills, an average of 4,744,000 barrels daily. This represented an increase of 0.7 percent over 1945 when 1,719,534,000 barrels (4,711,000 barrels daily) were charged to stills, and compares with 3,861,000 barrels per day in 1941.

The refining industry's effort to manufacture products in quantities to meet the unexpectedly large demand was the basis for the establishment of new peaks.

Refining operations followed a fairly stable trend throughout the year, the highest rate of charging crude to stills being well below the peak of 1945 and the low point being considerably above the low of 1945. There was a difference of only 336,000 barrels daily between the lowest and highest monthly average of 1946, whereas there was a variation of 757,000 barrels daily between the high and low of 1945.

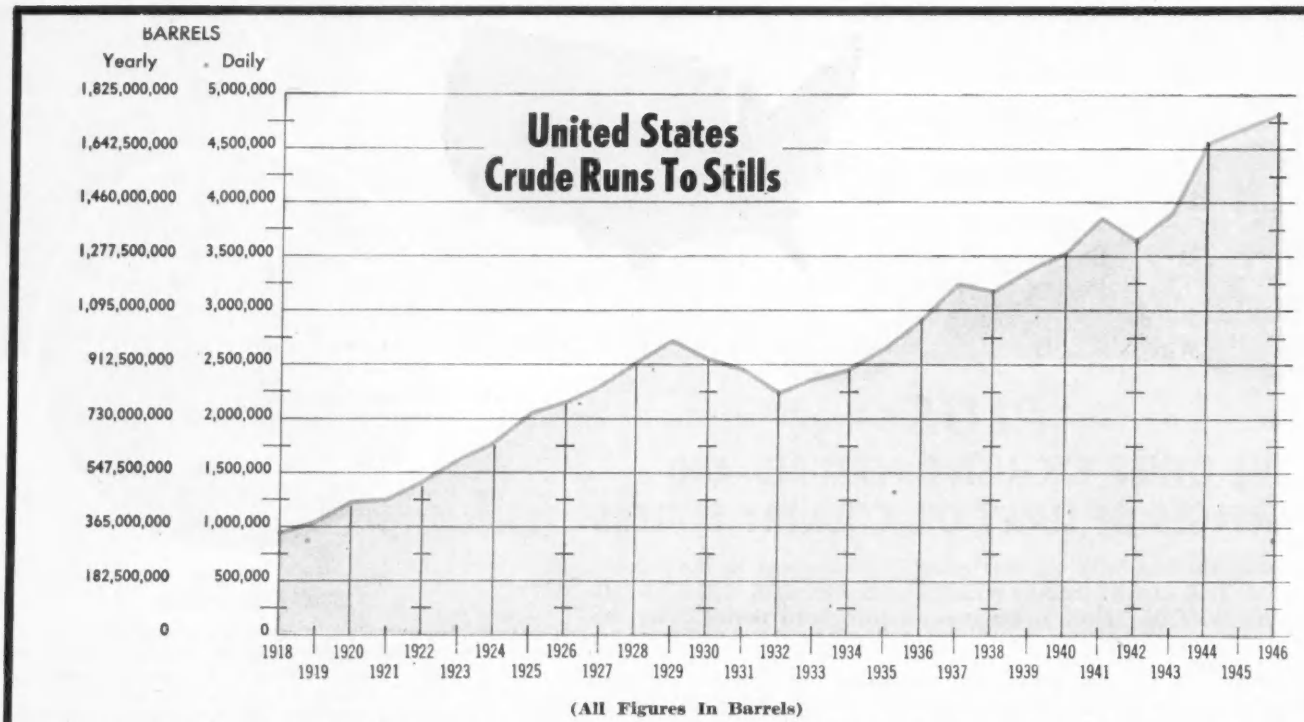
The smallest crude runs to stills during 1946 occurred in January, when an average of 4,520,000 barrels of crude was charged daily whereas the low point during 1945 was 4,244,000 barrels daily during October. The largest volume of crude during 1946 was run to stills in July and August, each month seeing a daily average of 4,856,000 barrels. This was substantially below the all-time peak of 5,001,000 barrels charged to stills daily during July of 1945.

The upward trend in refining operations is emphasized with the increased daily capacity of the plants by 154,000 barrels in 1946. The capacity of the plants in December, 1946, was 5,558,000 barrels daily as compared with 5,404,000 barrels daily in the same month of 1945. Also, during the same month in 1946 the plants were using 86.5 percent of their capacity as compared with 84.6 percent in 1945.

The daily average run to stills in December, 1946, was 4,810,000 barrels as compared with 4,574,000 barrels in December, 1945.

Proper adjustment of refinery product yields to meet changes in consumption of different products was a problem last year, and probably will continue to be during 1947. Demands for heating and burning oils are proportionately larger than normal relationship with demand for other products.

The record quantity of crude oil processed saw refiners make important adjustments in yields of products in an



(All Figures In Barrels)

YEAR	Annual Total	Daily Average	YEAR	Annual Total	Daily Average	YEAR	Annual Total	Daily Average	YEAR	Annual Total	Daily Average
1918	326,025,000	893,200	1925	739,920,000	2,027,200	1932	819,997,000	2,240,400	1939	1,237,840,000	3,391,000
1919	361,520,000	990,500	1926	779,264,000	2,135,000	1933	861,254,000	2,359,600	1940	1,294,283,000	3,536,300
1920	433,915,000	1,185,600	1927	828,835,000	2,270,800	1934	895,636,000	2,453,800	1941	1,409,192,000	3,860,800
1921	443,363,000	1,214,700	1928	913,295,000	2,495,300	1935	965,790,000	2,646,000	1942	1,334,103,000	3,655,076
1922	500,706,000	1,371,800	1929	987,708,000	2,706,100	1936	1,068,570,000	2,919,000	1943	1,429,738,000	3,917,000
1923	581,238,000	1,592,400	1930	927,447,000	2,541 000	1937	1,183,440,000	3,242,000	1944	1,665,684,000	4,563,517
1924	643,719,000	1,758,800	1931	894,608,000	2,451,000	1938	1,165,015,000	3,191,800	1945	1,719,534,000	4,711,000
									1946	1,731,458,000	4,743,900

Source:—U. S. Bureau of Mines, except for latest year which has been calculated from Bureau statistics for first 10 months and American Petroleum Institute weekly reports for the last two months.

Due To In 1946

attempt to balance supply with changes in demand. For example, less gasoline and residual fuel oil was manufactured, while more distillate fuel oil, kerosine and lubricants were made.

The high rate at which refining plants were operated resulted in the manufacture of more petroleum products than were consumed, and stocks of refined oils increased materially. Stocks of all refined oils rose 109,000 barrels daily during the year.

But through adjustments of yields, refiners were fairly successful in preventing too large an increase in stocks of any one product. Early in the year it appeared gasoline stocks were going to rise to an all-time peak and become a serious problem, but adjustments to make more distillate fuel oil and less gasoline eased the situation.

As a result, the industry ended the year with stocks in fairly good relationship with demand, the increase in refined product inventories actually constituting a building up of below-normal levels. Additional details on stocks are given in an accompanying article.

Gasoline (including straight run, cracked, and natural blended at refineries) production during 1946 from crude oil totaled 747,708,000 barrels, an increase of 11.4 percent over 1941 but 3.5 percent lower than the 774,460,000 barrels turned out in 1945. Daily average production last year was 2,049,000 barrels as compared with 2,122,000 barrels daily in 1945.

Output of kerosine was boosted considerably during the year. Total yield was 104,425,000 barrels as compared with 81,024,000 barrels in 1945, an increase of 28.9 percent.

Distillate fuel oil also was higher by 15.7 percent. Total production in 1946 was 288,445,000 barrels as against 249,224,000 barrels in 1945. This was a daily yield of 790,000 barrels in 1946 as compared with 683,000 barrels daily the preceding year.

Other Products

Production of lubricants also rose by 9.7 percent, totaling 45,912,000 barrels in 1946 and 41,867,000 barrels in 1945. Residual fuel oil, although up 25 percent from 1941, was down 8.2 percent last year when compared with the output in 1945. Last year's production was 431,205,000 barrels while in 1945 the output was 469,492,000 barrels.

Texas' refining capacity continued to be the greatest in the nation. Total capacity in Texas in December, 1946, was 1,556,000 barrels daily, a drop of 9000 barrels daily from 1945. However, California's capacity rose 27,000 barrels daily last year to 994,000 barrels daily. Other gains in refining capacity were noted on the East Coast, Rocky Mountains and the Appalachian regions.

Refinery Production of Major Products and Percent Yield from Crude Run at U. S. Refineries

Results in December and Year, 1946, compared with same periods in 1945 and 1941. Figures are from Bureau of Mines except that November and December, 1946, are estimated with aid of A. P. I. weekly bulletins.

(THOUSANDS OF BARRELS)

ITEM	1941	1945	1946	% Diff. '41-'46	% Diff. '45-'46
*Gasoline:					
Production, December	61,640	63,706	67,353	+ 9.3	+ 5.7
(Daily Average)	1,988	2,055	2,173	+ 9.3	+ 5.7
Percent Yield from Crude	45.7	41.2	41.5	.....	.....
Production Whole Year	671,110	774,460	747,708	+11.4	— 3.5
(Daily Average)	1,839	2,122	2,049	+11.4	— 3.5
Kerosine:					
Production, December	6,682	8,543	8,755	+31.0	+ 2.5
(Daily Average)	215	276	282	+31.0	+ 2.5
Percent Yield from Crude	5.3	6.0	5.9	.....	.....
Production, Whole Year	72,586	81,024	104,425	+43.9	+28.9
(Daily Average)	199	222	286	+43.9	+28.9
Distillate Fuel Oil:					
Production, December	17,142	21,176	25,902	+51.1	+22.3
(Daily Average)	553	683	836	+51.1	+22.3
Percent Yield from Crude	13.7	14.9	17.4	.....	.....
Production, Whole Year	189,116	249,224	288,445	+52.5	+15.7
(Daily Average)	518	683	790	+52.5	+15.7
Residual Fuel Oil:					
Production, December	31,127	38,609	36,012	+15.7	— 6.7
(Daily Average)	1,004	1,245	1,162	+15.7	— 6.7
Percent Yield from Crude	24.9	27.2	24.2	.....	.....
Production, Whole Year	343,995	469,492	431,205	+25.4	— 8.2
(Daily Average)	942	1,286	1,181	+25.4	— 8.2
Lubricants:					
Production, December	3,554	3,312	4,175	+17.5	+26.1
(Daily Average)	115	107	135	+17.5	+26.1
Percent Yield from Crude	2.8	2.3	2.8	.....	.....
Production, Whole Year	39,539	41,867	45,912	+16.1	+ 9.7
(Daily Average)	108	115	126	+16.1	+ 9.7

* Production includes straight run, cracked, and natural blended at refineries. Yield indicates percent of crude runs made into straight run and cracked gasoline.

Crude Runs to Stills in U. S. Refineries and Percent of Refinery Capacity Used, by Districts, December and Years, 1941, 1945, and 1946

Runs from Bureau of Mines, except November and December, 1946, from American Petroleum Institute; Capacities from American Petroleum Institute

(THOUSANDS OF BARRELS)

	CRUDE RUN IN DECEMBER							REFINING CAPACITY AND USE IN DECEMBER						CRUDE RUN DURING YEAR						
	Total Amount Run During Month				Daily Average Run During Month			Daily Capacity			Percent Capacity Used			Total Amount Run During Year				Daily Average Run During Year		
Refining District	Dec. 1941	Dec. 1945	Dec. 1946	% Diff. 1945-1946	Dec. 1941	Dec. 1945	Dec. 1946	Dec. 1941	Dec. 1945	Dec. 1946	Dec. 1941	Dec. 1945	Dec. 1946	1941	1945	1946	% Diff. 1945-1946	1941	1945	1946
East Coast	19,750	23,358	23,291	— 0.3	637	753	751	704	790	839	90.5	95.3	89.5	217,046	273,667	276,400	+ 1.0	595	750	757
Appalachian	4,575	4,769	5,007	+ 5.0	148	154	162	174	196	205	85.1	78.6	79.0	53,499	56,199	55,784	— 0.7	147	154	153
District No. 1	.....	2,965	3,073	+ 3.6	.....	96	99	.....	146	143	.....	65.8	69.2	.....	35,745	35,093	— 1.8	.....	98	96
District No. 2	.....	1,804	1,934	+ 7.2	.....	58	63	.....	50	62	.....	116.0	101.6	.....	20,454	20,691	+ 1.2	.....	56	57
Ill., Ind., Ky.	22,078	22,212	24,047	+ 8.3	712	716	776	776	857	870	91.8	83.5	89.2	251,257	275,853	280,175	+ 1.6	688	756	768
Okla., Kans., Mo.	10,711	11,598	11,886	+ 2.5	346	374	383	418	469	469	83.3	79.7	81.7	127,130	139,176	138,502	— 0.5	348	381	380
Texas Inland	5,761	6,034	6,763	+12.1	186	195	218	265	330	330	70.2	59.1	66.1	66,640	84,510	78,909	— 6.6	183	231	216
Texas Gulf Coast	33,919	35,416	36,349	+ 2.6	1,094	1,142	1,173	1,117	1,237	1,226	97.9	92.3	95.7	363,252	403,417	425,348	+ 5.4	995	1,105	1,165
Louisiana Gulf	4,925	9,163	10,693	+16.7	159	296	345	172	260	321	92.4	113.8	107.5	54,300	99,309	120,929	+21.8	149	272	331
Ark. and La. Inland	2,613	1,753	1,892	+ 7.9	84	57	61	97	126	126	86.6	45.2	48.4	29,365	27,937	21,907	—21.6	80	77	60
Rocky Mountains	2,848	3,679	4,285	+16.5	92	119	138	137	172	178	67.2	69.2	77.5	33,570	45,944	48,013	+ 4.5	92	126	132
District No. 3	.....	358	352	— 1.7	.....	12	11	.....	13	13	.....	92.3	84.6	.....	4,459	4,020	— 9.8	.....	12	11
District No. 4	.....	3,321	3,933	+18.1	.....	107	127	.....	159	165	.....	67.3	77.0	.....	41,485	43,993	+ 6.0	.....	114	121
California	17,805	23,797	24,889	+ 4.6	574	768	803	787	967	994	72.9	79.4	80.8	213,133	313,522	285,491	— 8.9	584	859	782
Total United States	124,985	141,779	149,102	+ 5.2	4,032	4,574	4,810	4,647	5,404	5,558	86.8	84.6	86.5	1,409,192	1,719,534	1,731,458	+ 0.7	3,861	4,711	4,744

United States Producing Oil Wells At Peak Level

THE number of producing oil wells in the United States increased as usual in 1946 and reached a new all-time peak of 424,286, as more wells were placed on production than the number abandoned or shut in.

An indicated 10,721 old wells were depleted and abandoned or shut in for other reasons during the year, but 15,962 new oil wells were completed in a return to a normal volume of drilling, resulting in an increase of 5241 in the number of producing oil wells for the year.

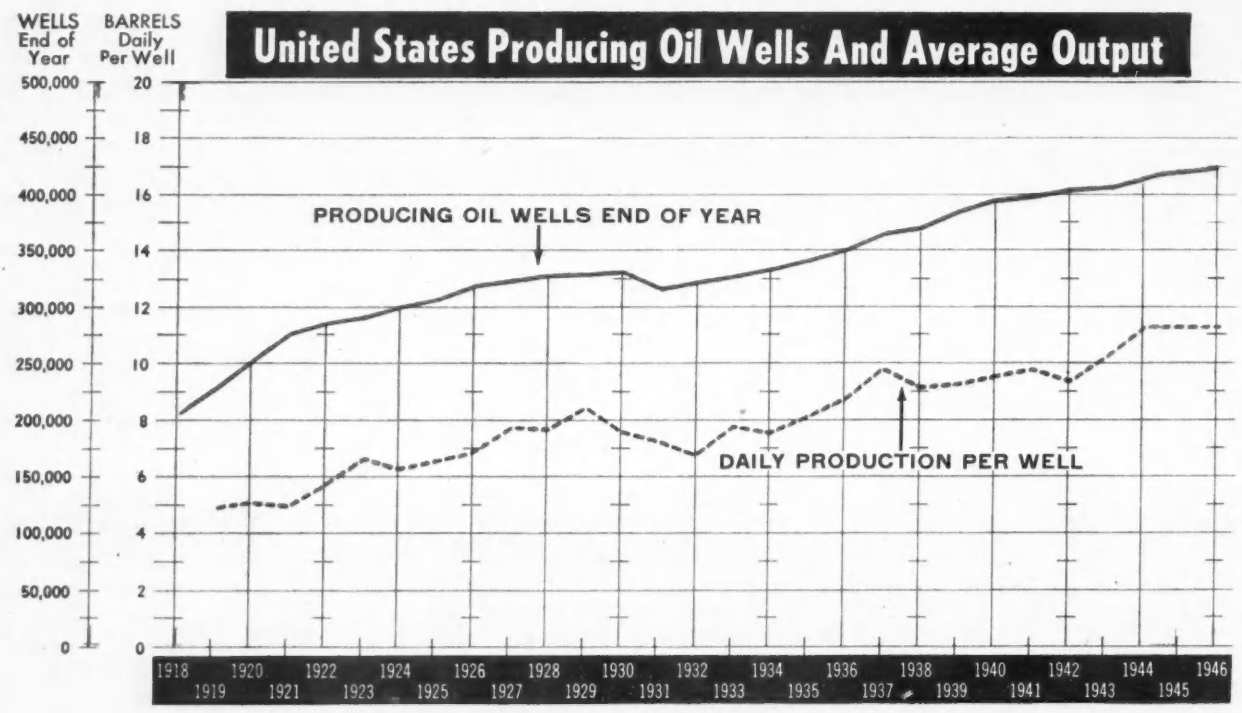
The 424,286 oil wells on production at the end of 1946 represented an increase of 1.3 percent over the 419,045 producing at the end of 1945.

While this gain in number of producing oil wells was fairly satisfactory, helping to take care of the perennial growth in demand for petroleum, it was only about normal or subnormal in relation to the year's drilling volume and probably was held down by the unsatisfactory crude price situation in the first half of the year, when prices still were artificially depressed. During that period the incentive to continue operating old wells was circumscribed, although kept alive by stripper well subsidies. But lifting of price controls for the industry at midyear allowed prices to rise to economic levels, and the price deterrent was alleviated.

Daily average output per well remains at record rate

The importance of satisfactory price in prolonging the life of oil wells is attested by an accompanying table showing that the number of producing wells increased 13,580 in 1937 and 10,950 in 1941, when prices were good in relation to drilling and development costs, although those gains also reflected relatively large numbers of oil well completions in the years mentioned.

While the number of producing oil wells reached a new high at the end of 1946, there was no let-down in the average rate of taking oil from the wells operated. For 1946 the production per well averaged 11.3 barrels daily, thus equaling the record average producing rate of 1945. This continued relatively high output per well resulted from the



YEAR	Number of Producing Oil Wells At End of Year	Gain In No. Producing Oil Wells	New Oil Wells Completed in Year	Production Per Well Per Day During Year
1918....	203,375	.....	17,860	.....
1919....	227,000	23,625	21,041	4.8
1920....	251,000	24,000	24,278	5.0
1921....	274,500	23,500	14,715	4.9
1922....	284,880	10,380	17,790	5.7
1923....	290,100	5,220	16,182	6.6
1924....	299,100	9,000	14,707	6.2
1925....	306,100	7,000	17,029	6.5
1926....	318,600	12,500	18,626	6.8
1927....	323,300	4,700	14,382	7.7
1928....	327,800	4,500	12,348	7.6
1929....	328,200	400	15,362	8.4
1930....	331,070	2,870	11,693	7.5
1931....	315,850	*15,220	7,011	7.2
1932....	321,500	5,650	10,530*	6.7
1933....	326,850	5,350	8,070	7.7
1934....	333,070	6,220	13,119	7.5
1935....	340,990	7,920	15,418	8.1
1936....	349,450	8,460	18,704	8.7
1937....	363,030	13,580	23,115	9.8
1938....	369,640	6,610	19,106	9.1
1939....	380,390	10,750	17,734	9.2
1940....	389,010	8,620	19,843	9.6
1941....	399,960	10,950	19,590	9.7
1942....	404,840	4,880	10,977	9.4
1943....	407,170	2,330	9,887	10.2
1944....	412,851	5,681	13,502	11.2
1945....	419,045	6,194	13,944	11.3
1946....	424,286	5,241	15,962	11.3

* Only decrease of recent time, reflecting abandonment or shutting in of many wells when early chaotic development of East Texas field, coupled with business depression, severely depressed crude prices.

SOURCE: Producing well data for 1918-1943 from U. S. Bureau of Mines, with more recent years by The Oil Weekly with cooperation of state conservation officials and others. Completion data since 1920 from records of The Oil Weekly, earlier years from Bureau of Mines. Daily average production per well obtained by dividing daily average production of nation for year by average number of wells producing during year, that is, between January 1 and December 31.

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continued heavy demand for crude oil and also from the economic necessity of obtaining maximum output from the wells kept in operation.

Although the total number of producing oil wells increased in 1946, the number of flowing wells declined from 48,456 at the beginning of the year to 48,387 at the end of the year, a decrease of 1/10 of 1 percent. This was not a satisfactory trend, because there is need for increasing United States producing capacity, and increases in flowing wells contribute most effectively to expansion of producing potential.

All but a few of the oil producing states showed increases in the number of producing wells in 1946. Those which registered decreases included Indiana, Kentucky, Michigan, Nebraska, Ohio, Pennsylvania, and West Virginia.

With 102,759 wells, Texas had nearly one-fourth of all the wells in the nation that were producing at the end of the year. Pennsylvania accounted for the second largest total with 82,998. Next came Oklahoma with 52,800 producing wells. The only other states with more than 25,000 producing wells were Illinois and Kansas with 28,996 and 27,245, respectively.

California, Ohio and New York followed with more than 22,000 wells each.

For number of producing wells in individual fields at end of 1946 see pages 154-186.

The eight states mentioned in the foregoing paragraphs as having more wells than others account for 85 percent of all the producing wells in the U. S.

The highest daily average output per well was recorded in Mississippi. Wells in this state were producing an average of 106.7 barrels daily at the end of 1946. Next came Colorado with 93.5 barrels, and Florida with 83.3 barrels daily per well.

Among the states with a large number of producing wells, Louisiana was ahead with an average output of 51.6 barrels per well.

Problems of Compilation

Data presented here on producing wells are from the U. S. Bureau of mines for 1943 and earlier years. For subsequent years Bureau of Mines data are not available, and statistics compiled by THE OIL WEEKLY are used, the sources being private companies and state conservation commissions.

An effort has been made to confine these statistics to active oil producing wells, and this purpose has been largely fulfilled, but Oil Weekly data are not strictly comparable with Bureau of Mines figures.

Formerly, there was some difficulty in excluding condensate wells from among the flowing oil wells, but most of the condensate wells are herewith excluded from data for 1945 and 1946. Excluded, for example, are condensate wells in Texas, which numbered about 900 at the end of 1946, with daily output of about 16,000 barrels. California condensate wells also are excluded. But the data still include several hundred condensate wells among the flowing oil wells, most of them being in Louisiana, while limited numbers are in Arkansas, Mississippi, and a few other areas.

Another difficulty in compiling statistics on producing oil wells is the exclusion of some thousands of shut-in or inactive oil wells which always complicate the situation. It is believed that most of these are here excluded, such known exclusions covering about 1500 shut-in or inactive oil wells in California, several hundred in Louisiana, 350 in Montana, about 150 in Arkansas, and varying numbers in Wyoming, Oklahoma, Kansas, Illinois, and other states.

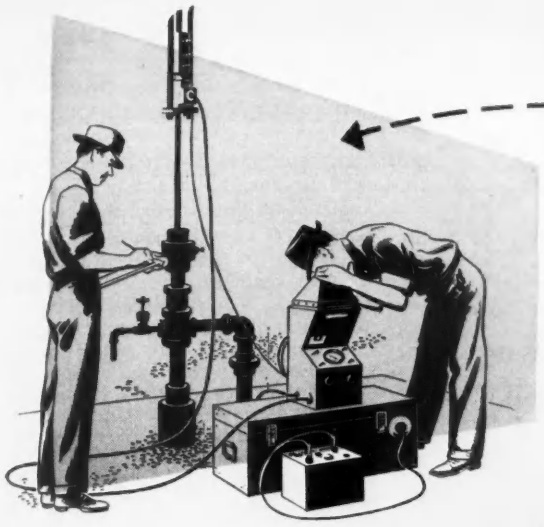
Producing Oil Wells, Flowing Wells, Average Output Per Well, by States and Districts, at end of 1946 and 1945

Data represent only active crude oil producing wells, including no gas wells, no inactive or shut-in oil wells, and only several hundred condensate wells, mostly in Louisiana.

(Compiled by The Oil Weekly, with cooperation of state conservation departments and other collaborators.)

	FLOWING OIL WELLS			OIL WELLS PRODUCING BY ARTIFICIAL LIFT			TOTAL PRODUCING OIL WELLS			DAILY AVERAGE PRODUCTION PER WELL AT END OF YEAR		
	End of 1945	End of 1946	Percent Change	End of 1945	End of 1946	Percent Change	End of 1945	End of 1946	Percent Change	1945	1946	Percent Change
Alabama	.....	1	.....	27	26	— 3.7	27	27	.....	25.7	35.9	+ 39.7
Arkansas	507	451	—11.0	2,766	2,836	+ 2.5	3,273	3,287	+ 0.4	31.4	23.7	— 24.5
California	1,889	1,894	+ 0.3	19,857	20,991	+ 5.7	21,746	22,885	+ 5.2	38.8	38.5	— 0.8
San Joaquin Valley	1,083	1,126	+ 4.0	11,154	11,580	+ 3.8	12,237	12,706	+ 3.8	32.6	33.3	+ 2.2
Coastal District	430	383	—10.9	1,681	2,041	+21.4	2,111	2,424	+14.8	68.1	58.5	— 14.1
Los Angeles Basin	376	385	+ 2.4	7,022	7,370	+ 5.0	7,398	7,755	+ 4.8	40.6	40.6	.....
Colorado	70	87	+24.3	173	293	+69.4	243	380	+56.4	91.8	93.5	+ 1.9
Florida	.....	2	.....	2	1	—50.0	2	3	+50.0	37.5	83.3	+122.1
Illinois	205	89	—56.6	27,710	28,907	+ 4.3	27,915	28,996	+ 3.9	7.3	7.0	— 4.1
Indiana	.....	4	.....	2,379	2,153	— 9.5	2,379	2,157	— 9.3	5.5	8.5	+ 54.5
Kansas	174	106	—39.1	26,518	27,139	+ 2.3	26,692	27,245	+ 2.1	9.4	10.0	+ 6.4
Kentucky	.....	3	.....	14,741	14,621	— 0.8	14,741	14,624	— 0.8	2.1	2.0	— 4.8
Louisiana	3,343	3,276	— 2.0	4,467	4,819	+ 7.9	7,810	8,095	+ 3.6	47.6	51.6	+ 8.4
North Louisiana	840	820	— 2.4	3,489	3,757	+ 7.7	4,329	4,577	+ 5.7	17.7	21.7	+ 22.6
South Louisiana	2,503	2,456	— 1.9	978	1,062	+ 8.6	3,481	3,518	+ 1.1	84.8	90.4	+ 6.6
Michigan	350	340	— 2.9	3,184	3,135	— 1.5	3,534	3,475	— 1.7	13.9	13.6	— 2.2
Mississippi	205	218	+ 6.3	437	568	+30.0	642	786	+22.4	84.5	106.7	+ 26.3
Missouri	.....	.....	.....	36	38	+ 5.6	36	38	+ 5.6	3.6	3.6	.....
Montana	31	26	—16.1	2,411	2,573	+ 6.7	2,442	2,599	+ 6.4	9.9	9.4	— 5.1
Nebraska	.....	.....	.....	70	58	—17.1	70	58	—17.1	10.7	12.4	+ 15.9
New Mexico	2,822	3,005	+ 6.5	1,542	1,594	+ 3.4	4,364	4,599	+ 5.4	22.6	22.6	.....
New York	.....	.....	.....	21,625	22,225	+ 2.8	21,625	22,225	+ 2.8	0.6	0.6	.....
Ohio	46	65	+41.3	23,029	22,907	— 0.5	23,075	22,972	— 0.5	0.3	0.4	+ 33.3
Oklahoma	1,337	1,512	+13.1	51,362	51,288	— 0.1	52,699	52,800	+ 0.2	7.3	7.1	— 2.7
Pennsylvania	.....	.....	.....	83,230	82,998	— 0.3	83,230	82,998	— 0.3	0.4	0.4	.....
Tennessee	.....	.....	.....	24	22	— 8.3	24	22	— 8.3	1.5	1.6	+ 6.7
*Texas	37,282	37,081	— 0.5	63,943	65,678	+ 2.7	101,225	102,759	+ 1.5	18.8	19.4	+ 3.2
District 1: South Central Texas	96	117	+21.9	3,225	3,132	— 2.9	3,321	3,249	— 2.2	5.7	5.8	+ 1.8
District 2: Refugio District	2,327	2,508	+ 7.8	761	775	+ 1.8	3,088	3,283	+ 6.3	40.6	41.1	+ 1.2
District 3: Upper Gulf Coast	5,071	4,982	— 1.8	3,100	3,250	+ 4.8	8,171	8,232	+ 0.7	52.2	51.3	— 1.7
District 4: Lower Gulf-Laredo District	3,432	3,560	+ 3.7	5,191	5,194	+ 0.1	8,623	8,754	+ 1.5	23.5	23.9	+ 1.7
District 5: East Central Texas	291	295	+ 1.4	1,383	1,398	+ 1.1	1,674	1,693	+ 1.1	21.3	49.9	+134.3
District 6: Northeast Texas	15,589	14,939	— 4.2	10,228	10,636	+ 4.0	25,817	25,575	— 0.9	15.6	16.2	+ 3.8
District 7-B: North Central Texas	582	651	+11.9	6,294	6,312	+ 0.3	6,876	6,963	+ 1.3	4.4	5.0	+ 13.6
District 7-C: West Texas	154	152	— 1.3	1,245	1,297	+ 4.2	1,399	1,449	+ 3.6	16.9	19.1	+ 13.0
District 8: West Texas	8,305	8,584	+ 3.4	8,127	8,761	+ 7.8	16,432	17,345	+ 5.6	26.9	28.8	+ 7.1
District 9: North Texas	1,398	1,250	—10.6	18,438	18,838	+ 2.2	19,836	20,088	+ 1.3	5.9	5.9	.....
District 10: Texas Panhandle	37	43	+16.2	5,951	6,085	+ 2.3	5,988	6,128	+ 2.3	13.7	13.2	— 3.7
West Virginia	.....	.....	.....	17,268	17,211	— 0.3	17,268	17,211	— 0.3	0.4	0.4	.....
Wyoming	195	227	+16.4	3,788	3,818	+ 0.8	3,983	4,045	+ 1.6	21.6	25.0	+ 15.7
Total United States	48,456	48,387	— 0.1	370,589	375,899	+ 1.4	419,045	424,286	+ 1.3	10.7	11.2	+ 4.7

* Texas districts shown here are Texas Railroad Commission subdivisions.



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Sucker rods are designed and built to take plenty of punishment under abusive operating conditions. To prolong their service, cut lifting cost and maintain production is a challenge met by the entire Jones organization.

Using precision equipment, our field engineers carefully analyze pumping conditions—often come up with the answer to perplexing problems. Back at the plant, metallurgists, researchers, and production men combine knowledge and skill to bring you the finest rods possible within the scope of most modern materials, methods and machines.

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More Wells To Require Lifting Equipment

Survey indicates purchases of new lifting units to be much greater than during 1946

PUMPING or artificial lifting equipment is indicated to be required to equip 16,420 wells during 1947, according to THE OIL WEEKLY's annual survey which took into consideration all flowing wells expected to require lifting aid during the year and all new wells in areas where formation pressure is insufficient to place the completions in the flowing class. The figure does not include complete units expected to be bought as replacements for obsolete or exhausted equipment installed on wells prior to the beginning of the year.

This number of units indicated is approximately 14 percent greater than the requirements of the industry during 1946 and shows a ratio considerably higher than the gain in producing wells. The trend indicates that the backlog of flowing wells augmented steadily since development of the East Texas field has begun to pass the peak and that despite deeper drilling, the industry is going to depend more and more on artificial lift for maintaining production quotas. For purposes of the survey all types of artificial lift, including air-gas lift and hydraulic-type down-the-hole pumping units were lumped under the general heading of "pumping units."

On the basis of oilwell completions during 1946, excluding distillate wells, 90.4 percent required artificial lift. Or, otherwise stated, out of every ten oil well to be completed slightly more than nine pumping units will be required.

Maintenance Increases

Along with augmented requirements for pumping units, the industry indicates a decided increase in the outlay for maintenance during 1947, when a sum of approximately $34,844,000 will be earmarked to care for *mechanical* maintenance requirements of the 383,534 pumping wells indicated to require maintenance during the year. This figure covers parts replacements and new rod and/or tubing strings, but does not cover the purchase of new units considered desirable through an attempt to better production performance. New prime movers, whether motors, internal combustion engines or compressors are, however, included in the over-all figures.

The survey indicates that the producing branch of the oil industry, in its first full calendar year since slackening of wartime demand and controls, is to have available from manufacturers during the year enough units to meet domestic and foreign demand, though the margin at the close of 1947 will be a slim one, and may result in a carry-over of orders if price, tax and labor conditions encourage the industry to proceed more rapidly than now contemplated with the program of replacing some of the "museum pieces" now being relied upon—for want of better equipment—to produce wells.

Texas alone promises to require 5602 pumping units during 1947, an increase of 33 percent over the previous year's purchases, with Louisiana (both areas combined) up 21 percent. Other areas also showing sharp increases are Colorado, Montana and Wyoming. New Mexico and Arkansas, on the other hand, indicate slight gains in the column which lists flowing over artificially lifted wells.

Sharpest raises in maintenance requirements are, naturally, in those sections having the highest percentages of pumping wells, although Texas, Oklahoma and Louisiana will be heavy purchasers also.

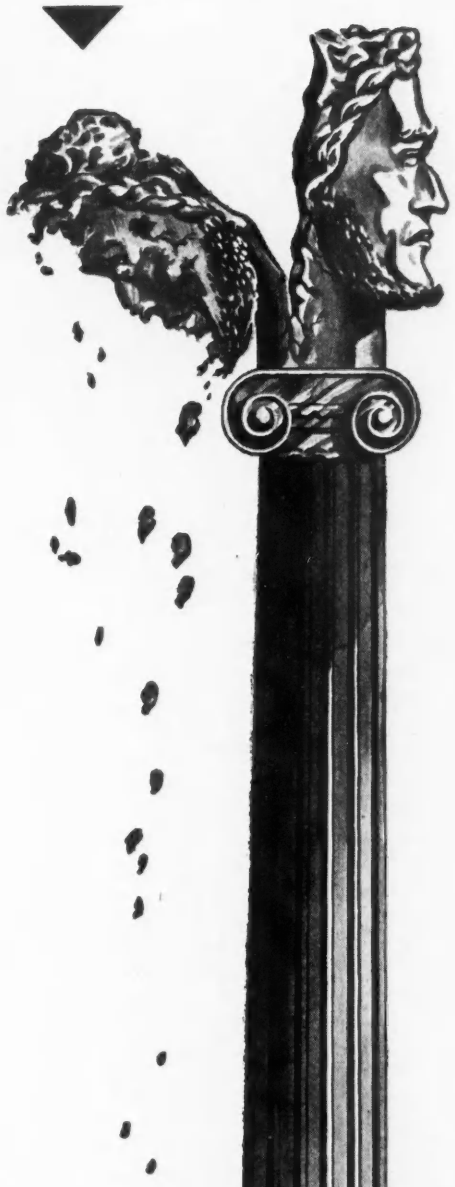
Estimate of 1947 Pumping Equipment Needs

(Includes requirements for all types of pumping units and also air/gas lift units)

STATE OR DISTRICT	Oil Wells Completed In 1946	Wells Put On Pump Or Lift In 1946	Number Wells Likely to Go On Pump or Air/Gas Lift During 1947	Number of Flowing Wells End of 1946	Estimated Average Number Pumping Wells To Be Maintained During 1947	Estimated Maintenance Cost (Equipment Only For All Pumping Wells in 1947)
Arkansas	106	116	110	451	2,871	$ 247,000
California	1,447	1,139	1,155	1,894	21,568	7,565,000
Colorado	157	140	143	87	364	334,000
Illinois	1,344	1,081	1,176	89	29,495	2,205,000
Indiana	276	276	270	4	2,361	136,000
Kansas	1,130	1,198	1,222	106	27,750	2,393,000
Kentucky	325	322	342	3	14,742	678,000
Louisiana	774	841	1,017	3,276	5,242	512,000
North Louisiana	441	461	492	820	3,970	388,000
South Louisiana	333	380	525	2,456	1,272	124,000
Michigan	238	248	278	340	3,274	301,000
Mississippi	141	128	175	218	656	61,000
Montana	151	166	170	26	2,658	275,000
New Mexico	308	125	160	3,005	1,674	385,000
New York	719	719	874	0	22,225	521,000
Ohio	365	346	340	65	23,077	928,000
Oklahoma	1,798	1,623	1,496	1,512	52,036	4,787,000
Pennsylvania	1,583	1,583	1,598	0	83,797	1,927,000
Texas	4,870	4,195	5,602	37,081	68,478	10,629,000
East Texas	401	868	1,468	12,034	12,768	1,979,000
North and West Cent. Texas	1,468	1,050	1,655	1,901	25,978	2,078,000
West Texas	1,519	833	909	8,723	10,512	4,362,000
Texas Panhandle	160	154	182	43	6,176	710,000
Gulf Coast, Upper	346	434	517	5,071	3,508	403,000
Gulf Coast, Lower and Southwest Texas	912	813	820	6,068	6,379	734,000
South Central Texas	64	43	51	117	3,157	363,000
West Virginia	101	101	114	0	17,261	497,000
Wyoming	116	84	160	116	3,875	446,000
Other States[1]	12	10	18	2	130	17,000
Total United States	15,962	14,441	16,420	48,387	383,534	$34,844,000

[1] Other States include Alabama, Florida, Missouri, Nebraska, Tennessee and Utah.

1946...RUST-BAN COULD HAVE...



1947...RUST-BAN WILL...

ARE you looking back on the expensive toll that rust has taken in your plant in 1946 . . . or looking forward to a rust-free 1947 with complete Rust-Ban* protection?

Rust-Ban's remarkable rust-inhibiting qualities are available in a line of coatings that range from thin, transparent oils for indoor use to the heaviest abrasion-resistant and weather-resistant paints for outdoor purposes.

If you have any problem where rust or corrosion is a factor, write your nearest Rust-Ban marketer and let him recommend the proper Rust-Ban product for complete protection. There's a Rust-Ban for practically every service condition known to the oil industry.

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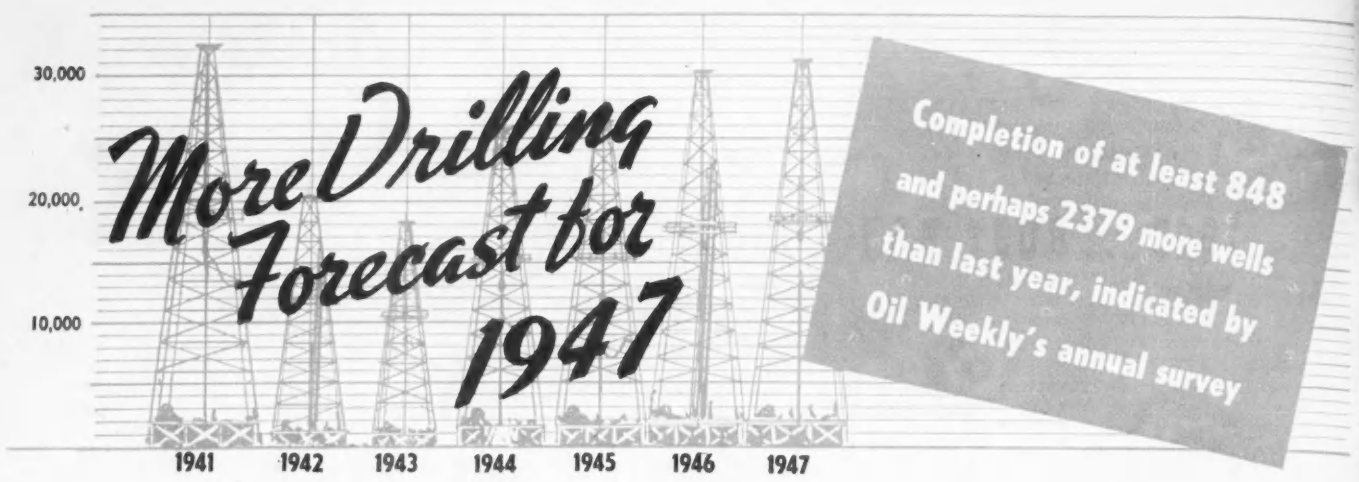


More Drilling Forecast for 1947

Completion of at least 848 and perhaps 2379 more wells than last year, indicated by Oil Weekly's annual survey

INDICATED drilling for 1947 will be up a minimum of 2.74 per cent over the figure of 30,221 for 1946, according to a survey of all producers, each of whom drilled more than 15 wells during the past year. After evaluating such information, it appears that at least 31,048 new wells will be drilled during the year, with the total rising to around 32,500 if such imminent crises as steel and coal strikes, labor difficulties within the oil industry, and regulatory interference are avoided.

Wildcats, exploratory tests of all kinds are indicated to amount to 5236 wells during 1947, up 8.40 percent over the total drilling done on deepening present wells, of 4830 logged for 1946. Wildcatting is to be especially heavy in Illinois, Indiana, Ohio and Oklahoma, where total drilling is indicated to be below that for 1946, and where the reduction is caused by exhaustion of proven locations and absence of promising new areas.

Footage to Increase

Footage indicated to be drilled in 1947 totals 106,449,000 feet, an increase of 5.38 percent over 1946's showing of 101,010,551 feet for all types of drilling. Totals include respectively estimated and actual footage drilled in 1946 and footage forecast for 1947 for new wells seeking production and for input or disposal purposes, as well as footage of wells drilled deeper in 1946 and that footage expected to be added by drilling old wells deeper in 1947.

Other states include: Arizona, Georgia, Idaho, Iowa, Maryland, New Jersey, North Dakota, Oregon, South Carolina, Tennessee Virginia and Washington.

Texas, with an indicated 8595 wells for 1947, will drill 27.68 percent of the nation's new wells, an increase of 5 percent over 1946 totals. Pennsylvania remains in

■ CONTINUED ON PAGE 115

Indicated MINIMUM Number of Wells and Footage to Be Drilled in 1947

Forecast covers all new wells to be drilled for oil or gas in 1947, salt water disposal wells, and water or gas input wells for repressuring and secondary recovery, but does not estimate old wells drilled deeper.

STATE OR DISTRICT	TOTAL WELLS			WILDCAT COMPLETIONS		FOOTAGE DRILLED[1]		
	Actual New Wells, 1946	New Wells Forecast, 1947	Percent Change	Forecast, 1947	Percent of New Wells, 1947	Footage Drilled, 1946	Footage to Be Drilled, 1947	Percent Change
Alabama	17	20	+ 18	17	85	69,381	84,000	+ 21
Arkansas	201	200	0	70	35	794,852	771,000	— 3
California	1,823	1,920	+ 5	290	15	7,763,246	8,440,000	+ 9
Colorado	176	180	+ 2	24	13	1,115,503	1,070,000	— 4
Florida	27	25	— 7	21	84	178,378	173,000	— 3
Illinois	2,342	2,050	— 12	610	30	5,936,676	5,319,000	— 10
Indiana	512	500	— 2	110	22	917,820	895,000	— 2
Kansas	2,127	2,225	+ 5	350	16	6,900,446	7,057,000	+ 10
Kentucky	853	900	+ 5	130	14	1,499,918	1,594,000	+ 6
Louisiana	1,418	1,429	+ 1	296	21	8,755,279	9,171,000	+ 10
North Louisiana	807	744	— 8	133	18	3,247,347	3,035,000	— 7
South Louisiana	611	685	+ 12	163	24	5,507,932	6,136,000	+ 11
Michigan	781	880	+ 13	290	33	1,753,591	1,984,000	+ 13
Mississippi	263	353	+ 34	100	28	1,952,981	2,696,000	+ 38
Missouri	34	40	+ 21	30	75	27,567	42,000	+ 52
Montana	258	282	+ 9	50	18	622,433	879,000	+ 41
Nebraska	5	8	+ 60	8	100	12,799	21,000	+ 64
New Mexico	442	554	+ 25	85	15	1,723,189	2,143,000	+ 24
New York	1,152	1,400	+ 22	15	1	1,620,899	2,008,000	+ 24
North Carolina	5	6	+ 20	6	100	26,173	32,000	+ 22
Ohio	1,313	1,250	— 5	75	17	3,398,593	3,251,000	— 5
Oklahoma	3,179	2,940	— 8	580	20	10,157,733	9,593,000	— 6
Pennsylvania	4,103	4,150	+ 1	80	2	7,002,902	7,327,000	+ 5
South Dakota	3	6	+100	6	100	8,038	18,000	+124
Texas	8,224	8,595	+ 5	1,818	21	35,848,363	38,265,000	+ 7
East Texas	714	600	— 16	136	23	3,810,251	2,996,000	— 21
North Texas	2,261	2,330	+ 3	435	19	5,883,332	7,082,000	+ 20
West Central Texas	647	685	+ 6	237	35	1,727,939	1,823,000	+ 6
West Texas	1,825	1,930	+ 6	260	13	9,043,573	9,609,000	+ 6
Texas Panhandle	340	400	+ 15	27	7	1,040,464	1,240,000	+ 19
Gulf Coast, Upper	680	840	+ 24	220	26	4,910,901	5,769,000	+ 18
Gulf Coast, Lower	1,133	1,150	+ 2	230	20	7,241,454	7,365,000	+ 17
Southwest Texas	443	440	— 1	168	38	1,522,536	1,512,000	— 1
South Central Texas	183	220	+ 20	105	48	667,913	869,000	+ 30
Utah	5	6	+ 20	6	100	14,329	17,000	+ 19
West Virginia	781	880	+ 13	70	8	2,177,906	2,428,000	+ 11
Wyoming	163	220	+ 35	70	32	678,790	1,038,000	+ 53
Other States[2]	12	29	+242	29	100	58,770	133,000	+126
Total United States	30,221	31,048	+ 2.74	5,236	16.86	101,010,551	106,449,000	+ 5.38

[1] Footage drilled in 1946 and footage forecast for 1947 include that for new wells seeking production and for input or disposal purposes, as well as footage of wells drilled deeper in 1946 and that footage expected to be added by drilling old wells deeper in 1947.

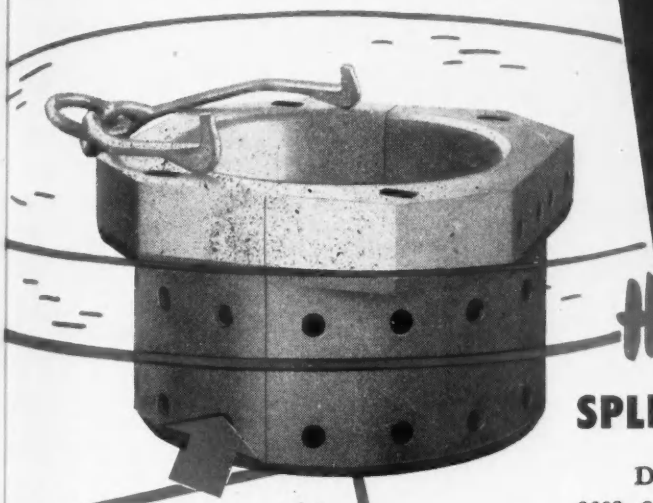
[2] Other states include: Arizona, Georgia, Idaho, Iowa, Maryland, New Jersey, North Dakota, Oregon, South Carolina, Tennessee Virginia and Washington.

Baash-Ross News

BAASH-ROSS TOOL COMPANY · LOS ANGELES · HOUSTON · NEW YORK

OUR 27th YEAR

Why not run your casing with the same simplicity, speed and convenience as you do drill pipe?

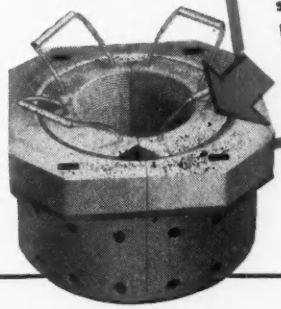


Here's how.. with the BAASH-ROSS SPLIT ROTARY TABLE CASING BUSHING

Did you know that you can run casing jobs with the same ease, convenience and simplicity with which you run your drill pipe? All that you need is a Baash-Ross Split Rotary Table Casing Bushing which replaces the regular master bushings in the rotary table and permits casing to be run *through the table* with the crew working at the same convenient height and in the same efficient manner as when handling drill pipe. Here's all you do...

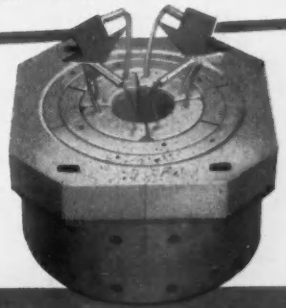
1 Simply lift out the regular master bushings, drop in the Split Casing Bushing and lock the table. The Split Casing Bushing is thus solidly supported and properly centered over the hole so that you can run casing with the same ease and with the crew working at the same convenient height as when running drill pipe.

2 For large diameter casing, the Slips seat directly in the bore of the Split Bushing. The extra long internal taper of the Split Bushing permits using long slips having a full-length support and with maximum gripping area. This eliminates crimping or damaging the thin-walled casing through concentration of slip pressure over a small area.

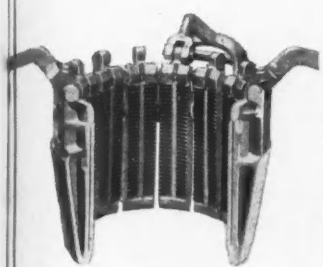


3 For medium sizes of casing, drop in a split and hinged Slip Adapter which is tapered on both sides and sets flush with the top of the Casing Bushing. Slips to fit the casing then seat directly into the split and hinged Adapter.

4 Even the smallest sizes of casing can be run with equal convenience by simply dropping in another concentric split and hinged Adapter, and slips to fit the casing then seat in the tapered bore of the inner Adapter.



Two Types of Slips



Type "UC" Casing Slips

Although the above illustrations show the Casing Bushing being used with conventional solid type of slips with flexible handles, the newly-developed Baash-Ross "UC" Casing Slips can also be used. "UC" Casing Slips provide the added safety of maximum gripping efficiency because they consist of many narrow slip segments flexibly linked together that w-r-a-p around the casing for a full-circumferential grip. Also, "UC" Casing Slips have easily renewable liners for long life and economy. (For more details on "UC" Casing Slips see page 276 of the new Composite Catalog).

Handles Wide Range of Casing Sizes

Modern rotary tables are able to support even the longest and heaviest casing strings with ample safety, and the Split Rotary Table Casing Bushing is ruggedly built to withstand the same service. Yet it is light in weight and readily portable in small tool cars.

The maximum casing size handled by the Casing Bushing is determined by the diameter of the opening through the rotary table. The accompanying chart shows the largest casing size that will pass through the Casing Bushings made for various size rotaries.

Rotary Bore	Maximum Casing Size
27½" Dia.	21½" API
24½" Dia.	18⅝" API
20½" Dia.	16" API
17½" Dia.	13⅜" API

Simplify your casing jobs, save time and increase crew efficiency by equipping your field with a Baash-Ross Split Casing Bushing. Available in sizes to fit all standard rotaries. Your nearby Baash-Ross representative will gladly supply full details—or write direct.

1946 Completions Soar

A SHARP rise in drilling rates boosted United States well completions during 1946 to near normal levels for the first time since the country entered World War II.

A total of 30,840 wells of all kinds were completed in the nation in 1946, an increase of 3700 wells or 13.6 percent over the preceding year. This total was made up of 30,221 new wells, and 619 old wells that were drilled deeper. The new wells drilled consisted of 27,975 drilled in search for oil or gas, and 2246 drilled for salt water disposal, water input and gas input purposes.

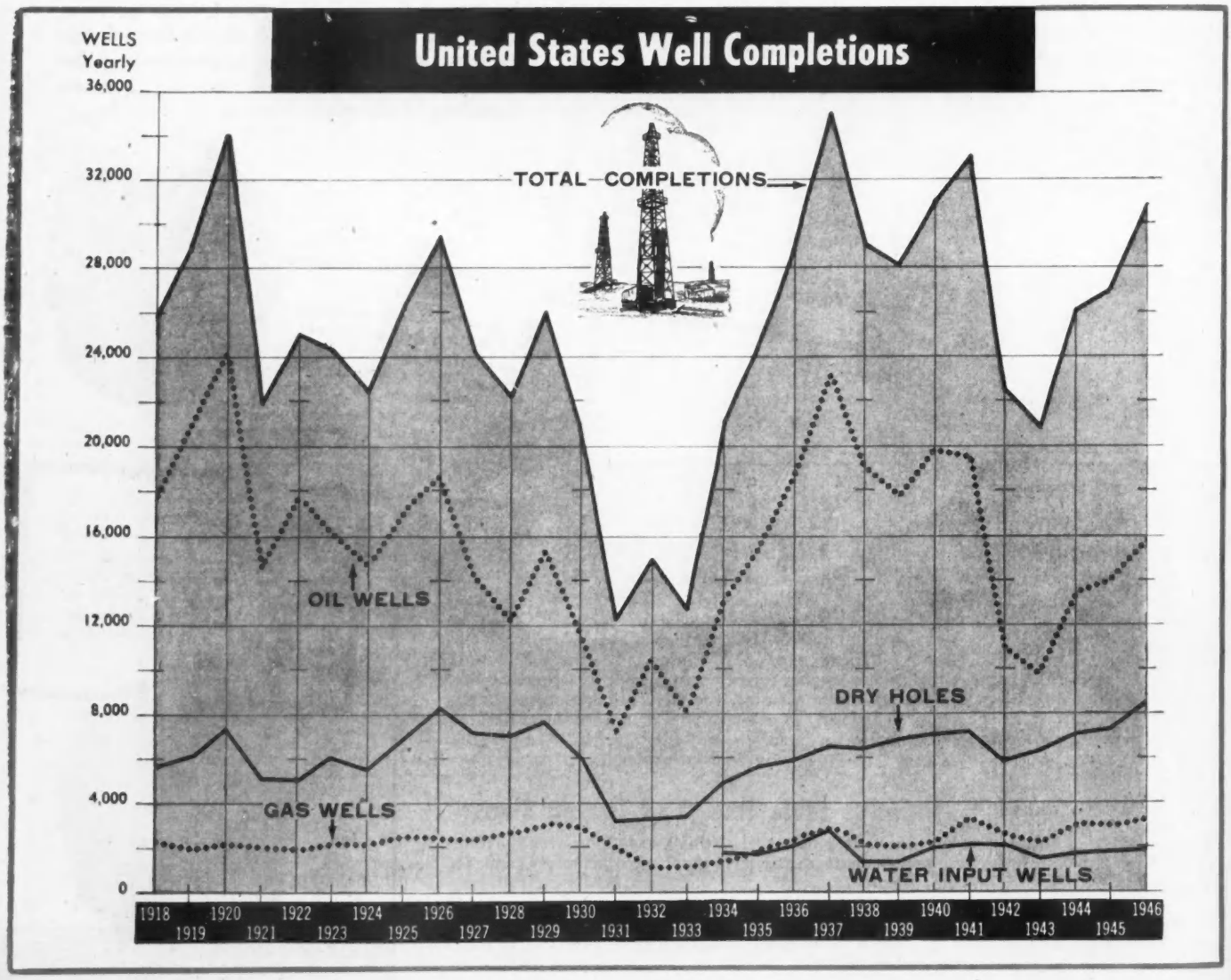
The year saw 19,472 productive wells completed, which exceeds that of any year since the United States entered the war. The productive wells were comprised of 15,962 which produced oil, 3303 gas and 207 distillate producers.

30,480 wells of all types completed during year, an increase of 3700 or 13.6 percent over the preceding 12 months

Dry holes drilled during 1946 set a new high, the figure of 8503 topping the previous record of 8328, recorded in 1926. The proportion of dry to total production-seeking wells rose from an even 30 percent in 1945 to 30.39 percent in 1946. The total of 2246 covering all service wells reached a figure short of 1941 total of 2361 but exceeded the previous year's figure by 89 wells.

Oklahoma Is Percentage Leader

Texas led all states in total number of new wells drilled, with 8226 wells. Pennsylvania, in second place, had just under half that number, or 4103 wells. Oklahoma held onto third place, with 3179 completions, and Illinois (2342 wells), Kansas (2127 wells) and California (1823 wells) followed in that order. Other states drilling more than one thousand wells were Louisiana, with 1418; Ohio, 1313; and New York, 1152. Among the principal oil-producing states, Oklahoma led in percentage, with a gain of 38.5,



to Prewar Level

against 31.7 for Illinois and 31.2 for Louisiana. Ohio registered a 28.6 percent gain, Texas an even 13 percent, and only California among the big producing states showed a drop, falling 12.3 percent below 1945 totals.

Three areas of Texas showed a decrease, the Panhandle, Upper Gulf Coast and Southwest Texas. All others showed increases over the previous year, ranging from 5.9 percent for the Lower Gulf Coast to 97.7 percent for East Texas exclusive of the border counties.

In the Rocky Mountain area Colorado alone showed an increase, where 176 wells were completed against the previous year's figure of 53, for a 232.1 percent gain. Montana and Wyoming showed decreases in drilling activity.

The Appalachian fields continued activity, at a rate slightly exceeding that of 1945. New York dropped to 1152 from 1155, or down 0.3 percent; while West Virginia was up 1.7 percent from 768 in 1945 to 781 in 1946; Pennsylvania, up 3.0 percent, from 3982 to 4103, gave the entire area a marked gain over the previous year's drilling. As in 1945, more than 1600 of the Pennsylvania wells were for water/gas input wells, with more than 400 of New York's totals being for water input alone.

Disposal Wells Trend Upward

Apart from the Appalachian areas, Oklahoma registered a sharp gain in input wells, as did the North Texas area in the Lone Star State. Salt water disposal wells gained in Kansas and Oklahoma, while those drilled for this purpose in Illinois dropped from a pervious total of 14 to one for 1946. The over-all total for the United States for salt water disposal rose from 42 to 50, marking continuation of the trend established in 1940.

Old wells drilled deeper during 1946 totalled 619, as against 491 in 1945. This shows a gain of 26.1 percent, with the total of 122 in Oklahoma crowding Texas' 156 for head of the list. The campaign in Illinois, which saw 130 deepened in 1945, dropped to 37 in 1946. California showed 74 drilled deeper in 1946, as against only 12 in 1945. Other states showing activity in this classification of drilling were Kansas, with 94, and Pennsylvania with 40, both up from previous year's figures.

Breakdown of wells completed in 1945 and 1946 by states on page 116.

Drilling Forecast

■ CONTINUED FROM PAGE 112

second place with 4150 wells to be drilled, followed by Oklahoma with 2940. Other states in line for sharply augmented programs are Michigan, Mississippi, New Mexico, New York and Wyoming.

"Far From Known Fields"

Exploration of many areas tested by geophysical methods during 1946 is expected to take drilling crews into areas heretofore untouched by other than water-well drillers. Continental shelf possibilities, initially developed in California and on the Gulf Coast, may be explored during the year on all sea fronts of the nation. The search for oil reserves far from known fields will be a large factor in the drilling program for the year.

Steel entering into well completion and drilling programs appears to be scheduled in quantities sufficient to meet the augmented drilling program, with many pipe manufacturers expected to be on current deliveries by the second quarter. Rig equipment, including prime movers, mud pumps, wire lines and other necessary units, promises to be available as required, with manufacturers already meeting prompt delivery demands.

Wells Completed Annually in United States

(Source: The Oil Weekly, with aid of other authoritative sources, 1921 to now; 1920 and earlier years from U. S. Bureau of Mines and Petroleum in the United States and Possessions, by Arnold and Kemnitzer.)

YEAR	NEW WELLS: For Oil or Gas: Oil	Gas	Distillate	Total Productive Wells	Dry Holes	Total New for Oil or Gas	Other New Wells: Water Input	Gas Input	Salt Water Disposal	Total New Wells	Old Wells Drilled Deeper	Total Completions
1859-1917...	380,502	20,183	....	400,685	91,821	492,506	.....	....	.....	492,506	.....	492,506
1918.....	17,860	2,324	....	20,184	5,629	25,813	.....	....	.....	25,813	.....	25,813
1919.....	21,041	2,153	....	23,194	6,075	29,269	.....	....	.....	29,269	.....	29,269
1920.....	24,278	2,275	....	26,553	7,476	34,029	.....	....	.....	34,029	.....	34,029
1921.....	14,715	2,081	....	16,796	5,193	21,989	.....	....	.....	21,989	.....	21,989
1922.....	17,790	1,926	....	19,716	5,191	24,907	.....	....	.....	24,907	.....	24,907
1923.....	16,182	2,140	....	18,322	6,043	24,365	.....	....	.....	24,365	.....	24,365
1924.....	14,707	2,172	....	16,879	5,591	22,470	.....	....	.....	22,470	.....	22,470
1925.....	17,029	2,536	....	19,565	6,847	26,412	.....	....	.....	26,412	.....	26,412
1926.....	18,626	2,502	....	21,128	8,328	29,456	.....	....	.....	29,456	.....	29,456
1927.....	14,382	2,494	....	16,876	7,213	24,089	.....	....	.....	24,089	.....	24,089
1928.....	12,348	2,720	....	15,068	7,164	22,232	.....	....	.....	22,232	.....	22,232
1929.....	15,362	3,107	....	18,469	7,600	26,069	.....	....	.....	26,069	.....	26,069
1930.....	11,693	2,971	....	14,664	6,163	20,827	.....	....	.....	20,827	.....	20,827
1931.....	7,011	1,966	....	8,977	3,256	12,233	.....	....	.....	12,233	.....	12,233
1932.....	10,530	1,033	....	11,563	3,347	14,910	.....	....	.....	14,910	.....	14,910
1933.....	8,070	1,197	....	9,267	3,498	12,765	.....	....	.....	12,765	.....	12,765
1934.....	13,119	1,496	....	14,615	4,811	19,426	1,696	....	.....	21,122	.....	21,122
1935.....	15,418	1,902	....	17,220	5,696	22,916	1,665	....	.....	24,581	.....	24,581
1936.....	18,704	2,375	....	21,079	5,787	26,866	2,096	....	.....	28,962	.....	28,962
1937.....	23,115	2,612	....	25,727	6,579	32,306	2,739	....	.....	35,045	.....	35,045
1938.....	19,106	2,143	....	21,249	6,515	27,764	1,363	....	.....	29,127	.....	29,127
1939.....	17,734	2,030	....	19,764	6,890	26,654	1,358	....	.....	28,012	.....	28,012
1940.....	19,843	2,265	....	22,108	7,053	29,161	1,988	....	.....	31,149	.....	31,149
1941.....	19,590	3,279	....	22,869	7,280	30,149	2,197	117	47	32,510	822	33,332
1942.....	10,977	2,685	105	13,767	5,962	19,729	2,141	73	47	21,990	588	22,578
1943.....	9,887	2,314	76	12,277	6,364	18,641	1,576	90	42	20,349	471	20,820
1944.....	13,502	3,024	54	16,580	7,153	23,733	1,784	218	51	25,786	377	26,163
1945.....	13,944	3,039	153	17,136	7,346	24,482	1,796	329	42	26,649	491	27,140
1946.....	**15,962**	**3,303**	**207**	**19,472**	**8,503**	**27,975**	**1,816**	**380**	**50**	**30,221**	**619**	**30,840**
Total...	833,027	88,147	595	921,769	272,374	1,194,143	24,215	1,207	279	1,219,844	3,368	1,223,212

Wells Completed by Oil Industry in United States in 1946, Compared with 1945

STATE OR DISTRICT	NEW WELLS DRILLED FOR OIL OR GAS																					
	PRODUCTIVE: (In Fields, Outposts, and Wildcats)									DRY HOLES										Total New For Oil or Gas		
	Oil		Gas		Distillate		Total Productive			In Fields		Outposts		Wildcats		Total Dry						
	1945	1946	1945	1946	1945	1946	1945	1946	% Diff.	1945	1946	1945	1946	1945	1946	1945	1946	% Diff.	1945	1946	% Diff.
Alabama	14	3	1				15	3	— 80.0	2	1			21	13	23	14	— 39.1	38	17	— 55.3
Arizona														3	2	3	2	— 33.3	3	2	— 33.3
Arkansas	118	106	5	5	2	3	125	114	— 8.8	31	31	1	1	41	55	73	87	+ 19.2	198	201	+ 1.5
California	1,699	1,447	45	56	2		1,746	1,503	— 13.9	50	66	2		280	254	332	320	— 3.6	2,078	1,823	— 12.3
Colorado	39	157	3	2			42	159	+278.6		3		1	11	13	11	17	+ 54.5	53	176	+232.1
Florida	1	2					1	2	+100.0	1	1			13	24	14	25	+ 78.6	15	27	+ 80.0
Georgia														6	2	6	2	— 66.7	6	2	— 66.7
Illinois	1,073	1,344		8			1,073	1,352	+ 26.0	302	445			386	543	688	988	+ 43.6	1,761	2,340	+ 32.9
Indiana	118	276	28	26			146	302	+106.8	89	118			87	92	176	210	— 19.3	322	512	+ 59.0
Iowa														1		1		—100.0	1		—100.0
Kansas	811	1,130	181	306			992	1,436	+ 44.8	361	400			317	269	678	669	— 1.3	1,670	2,105	+ 26.0
Kentucky	331	325	231	226			562	551	— 2.0	62	217			90	84	152	301	+ 98.0	714	852	+ 19.3
Louisiana	599	774	82	100	46	72	727	946	+ 30.1	217	256	3	3	132	208	352	467	+ 32.7	1,079	1,413	+ 31.0
North Louisiana	213	441	70	93	13	24	296	558	+ 88.5	76	122	2	2	82	123	160	247	+ 48.8	456	805	+ 76.5
South Louisiana	386	333	12	7	33	48	431	388	+ 10.0	141	134	1	1	50	85	192	220	+ 14.6	623	608	+ 2.4
Maryland														1	1	1	1		1	1	
Michigan	291	238	49	94		1	340	333	— 2.1	176	207	9	2	234	227	419	436	+ 4.1	759	769	+ 1.3
Mississippi	191	141	3	16	8	3	202	160	— 20.8	45	24			121	79	166	103	— 38.0	368	263	— 28.5
Missouri	4	7	10	4			14	11	— 21.4	10				20	23	30	23	— 23.3	44	34	— 22.7
Montana	232	151	49	20			281	171	— 39.1	57	60		3	16	19	73	82	+ 12.3	354	253	— 28.5
Nebraska														7	5	7	5	— 28.6	7	5	— 28.6
New Mexico	277	308	15	43			292	351	+ 20.2	65	43	1		65	48	131	91	— 30.5	423	442	+ 4.5
New York	723	719	7	9			730	728	— 0.3		17	6		11	1	17	18	+ 5.9	747	746	— 0.1
North Carolina														1	5	1	5	+400.0	1	5	+400.0
North Dakota			7				7		—100.0										7		—100.0
Ohio	248	365	352	537			600	902	+ 50.3	349	365			66	45	415	410	— 1.2	1,015	1,312	+ 29.3
Oklahoma	1,370	1,798	125	216	2	3	1,497	2,017	+ 34.7	464	688			299	414	763	1,102	+ 44.4	2,260	3,119	+ 38.0
Oregon														1	2	1	2	+100.0	1	2	+100.0
Pennsylvania	1,547	1,583	588	611			2,135	2,194	+ 2.8	146	226	51	1	7	2	204	229	+ 12.3	2,339	2,423	+ 3.6
South Dakota														3	3	3	3		3	3	
Tennessee														6	2	6	2	— 66.7	6	2	— 66.7
Texas	4,025	4,870	699	471	93	124	4,817	5,465	+ 13.5	1,203	1,335	17	48	1,203	1,326	2,423	2,709	+ 11.8	7,240	8,174	+ 12.9
East Texas Border Co.'s	2	42	92	128	10	3	104	173	+ 66.3	5	9			19	12	24	21	— 12.5	128	194	+ 51.6
Rest of Eastern Texas	145	359	13	19	3	2	161	380	+136.0	34	54	2		66	81	102	135	+ 32.4	263	515	+ 95.8
North Texas	967	1,210	15	15			982	1,225	+ 24.7	507	633	2	4	305	366	814	1,003	+ 23.2	1,796	2,228	+ 24.1
West Central Texas	199	258	48	31			247	289	+ 17.0	101	175		2	123	179	224	356	+ 58.9	471	645	+ 36.9
West Texas	1,289	1,519	24	17			1,313	1,536	+ 17.0	167	130	8	20	192	137	367	287	— 21.8	1,680	1,823	+ 8.5
Texas Panhandle	179	160	341	131			520	291	— 44.0	32	34			9	12	41	46	+ 12.2	561	337	— 39.9
Gulf Coast, Upper	353	346	43	28	41	45	437	419	— 4.1	124	117	3	3	141	138	268	258	— 3.7	705	677	— 4.0
Gulf Coast, Lower	645	751	88	69	37	63	770	883	+ 14.7	120	80		13	178	155	298	248	— 16.8	1,068	1,131	+ 5.9
Southwest Texas	220	161	32	30	2	9	254	200	— 21.3	101	87	1	4	118	150	220	241	+ 9.1	474	441	— 7.0
South Central Texas	26	64	3	3		2	29	69	+138.0	12	16	1	2	52	96	65	114	+ 75.4	94	183	+ 94.7
Utah		1	2				2	1	— 50.0					2	4	2	4	+100.0	4	5	+ 25.0
Virginia														1	2	1	2	+100.0	1	2	+100.0
Washington														4	1	4	1	— 75.0	4	1	— 75.0
West Virginia	86	101	552	541			638	642	+ 0.6	108	129	15	1	6	9	129	139	+ 7.8	767	781	+ 1.8
Wyoming	147	116	5	12		1	152	129	— 15.1	14	14	3	2	24	18	41	34	— 17.1	193	163	— 15.5
Total United States	13,994	15,962	3,039	3,303	153	207	17,136	19,472	+ 13.6	3,752	4,646	108	62	3,486	3,795	7,346	8,503	+ 15.8	24,482	27,975	+ 14.3

STATE OR DISTRICT	OTHER NEW WELLS						TOTAL NEW WELLS			OLD WELLS DRILLED DEEPER									TOTAL ALL WELLS		
	Water Input		Gas Input		Salt Water Disposal					Oil		Gas		Dry		Total					
	1945	1946	1945	1946	1945	1946	1945	1946	% Diff.	1945	1946	1945	1946	1945	1946	1945	1946	% Diff.	1945	1946	% Diff.
Alabama							38	17	— 55.3										38	17	— 55.3
Arizona							3	2	— 33.3										3	2	— 33.3
Arkansas							198	201	+ 1.5	2	2					2	2		200	203	+ 1.5
California							2,078	1,823	— 12.3	11	72		1	1	1	12	74	+ 516.7	2,090	1,897	— 9.2
Colorado							53	176	+232.1										53	176	+232.1
Florida							15	27	+ 80.0										15	27	+ 80.0
Georgia							6	2	— 66.7										6	2	— 66.7
Illinois	2	1	1		14	1	1,778	2,342	+ 31.7	118	29			12	8	130	37	— 71.5	1,908	2,379	+ 24.7
Indiana							322	512	+ 59.0	7	5	1		2	5	10	10		332	522	+ 57.2
Iowa							1		—100.0										1		—100.0
Kansas					13	22	1,683	2,127	+ 26.4	40	61			34	33	74	94	+ 27.0	1,757	2,221	+ 26.4
Kentucky	1					1	715	853	+ 19.3	5	2		2	2	4	7	8	+ 14.3	722	861	+ 19.3
Louisiana	1			3	1	2	1,081	1,418	+ 31.2	4			1	2	3	6	4	— 33.3	1,087	1,422	+ 30.8
North Louisiana				1	1	1	457	807	+ 76.6	1			1	1	2	2	3	+ 50.0	459	810	+ 76.5
South Louisiana	1			2		1	624	611	— 2.1	3				1	1	4	1	— 75.0	628	612	— 2.5
Maryland							1	1											1	1	
Michigan			2	12			761	781	+ 2.6	1				1	4	2	4	+100.0	763	785	+ 2.6
Mississippi							368	263	— 28.5	1	3					1	3	+200.0	369	266	— 27.9
Missouri							44	34	— 22.7					4		4		—100.0	48	34	— 29.2
Montana		5					354	258	— 27.1		5						5		354	263	— 25.7
Nebraska							7	5	— 28.6										7	5	— 28.6
New Mexico							423	442	+ 4.5	1	18			1	3	2	21	+950.0	425	463	+ 8.9
New York	408	406					1,155	1,152	— 0.3				1				1		1,155	1,153	— 0.2
North Carolina							1	5	+400.0										1	5	+400.0
North Dakota							7		—100.0										7		—100.0
Ohio	5		1	1			1,021	1,313	+ 28.6		2		6	2	5	2	13	+550.0	1,023	1,326	+ 29.6
Oklahoma	5		22	46	9	14	2,296	3,179	+ 38.5	36	72	5	11	14	39	55	122	+121.8	2,351	3,301	+ 40.4
Oregon							1	2	+100.0										1	2	+100.0
Pennsylvania	1,360	1,392	283	288			3,982	4,103	+ 3.0	1	3	16	24	1	13	18	40	+122.2	4,000	4,143	+ 3.6
South Dakota							3	3											3	3	
Tennessee							6	2	— 66.7										6	2	— 66.7
Texas	14	12	19	30	5	10	7,278	8,226	+ 13.0	95	116	7	6	29	34	131	156	+ 19.1	7,409	8,382	+ 13.6
East Texas Border Co.'s							128	194	+ 51.6										128	194	+ 51.1
Rest of Eastern Texas				1		4	263	520	+ 97.7	3	2		2	2		5	4	— 20.0	268	524	+ 95.5
North Texas	13	8	17	20	4	5	1,830	2,261	+ 23.6	12	17			8	13	20	30	+ 50.0	1,850	2,291	+ 23.8
West Central Texas		1		1			471	647	+ 37.4	5	10	2	1	4	9	11	20	+ 81.8	482	667	+ 38.4
West Texas		1		1			1,680	1,825	+ 8.6	42	43			10	2	52	45	— 13.5	1,732	1,870	+ 8.0
Texas Panhandle		1		2			561	340	— 39.4	22	27	2		3	1	27	28	+ 3.7	588	368	— 37.4
Gulf Coast, Upper	1			2		1	706	680	— 3.7	5		1		1		7		—100.0	713	680	— 4.6
Gulf Coast, Lower			2	2			1,070	1,133	+ 5.9	4	13	2	1	1	8	7	22	+214.3	1,077	1,155	+ 7.2
Southwest Texas		1		1			474	443	— 6.5	2	4		2		1	2	7	+250.0	476	450	— 5.5
South Central Texas					1		95	183	+ 92.6										95	183	+ 92.6
Utah							4	5	+ 25.0										4	5	+ 25.0
Virginia							1	2	+100.0										1	2	+100.0
Washington							4	1	— 75.0										4	1	— 75.0
West Virginia			1				768	781	+ 1.7	3	5	30	18	2	2	35	25	— 28.6	803	806	+ 0.4
Wyoming							193	163	— 15.5										193	163	— 15.5
Total United States	1,796	1,816	329	380	42	50	26,649	30,221	+ 13.4	325	395	59	70	107	154	491	619	+ 26.1	27,140	30,840	+ 13.6

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Sharp Increase Sends Footage Drilled To Near-Record Level

Big gain in wells completed responsible for the drilling of second largest amount of hole in history despite less depth per well

AIDED by the sharp increase in well completion rates, the United States during 1946 drilled more than 100 million feet of hole for the second time in history. The 1946 total of 101,010,551 feet drilled (in wells completed during the year) being surpassed only by 1937's total of 104,733,341 feet.

That the increase in wells completed was the factor that boosted footage drilled by 9 million feet is attested through a decline in the average depth drilled per well. The average depth per well of 3342 feet was 147 less feet per well than recorded in 1945. Nevertheless, the average depth of completions in 1946 also was the second highest in history, the figure being exceeded only by the average of 3489 feet per well recorded in 1945.

The influence of the gain in number of wells completed also is shown by footage drilled gaining only 8.6 percent while completions were rising 13.4 percent. All the figures quoted here are exclusive of old wells drilled deeper, which in 1946 totaled 619 wells and 368,739 feet of hole.

Texas, drilling 35,848,363 feet of hole, easily led all others. Oklahoma was second with 10,157,733 feet, followed by Louisiana with 8,755,279 feet. Texas' footage was up 3 million feet, Oklahoma gained less than 1 million feet, and Louisiana was up 100 thousand feet.

Only the North Texas area in that state showed an increase in average drilling depth of more than 22 feet, with an average of 2602 feet for 1946 against 2487 for 1945. Also in the plus column were West Texas, with a gain of 22 feet per well, and the Lower Gulf Coast, averaging 21 feet deeper per well. Other Texas areas showed a decrease in average depths, with the decrease amounting to 1005 feet per well in South Central Texas, where the 1946 average well went to 3650 feet against the 4655-foot depth registered in 1945. In spite of the large number of completions in the Carthage gas field, the East Texas area showed a reduction in average footing from 6044 feet in 1945 to 5151 in 1946, ranking next to South Central Texas in reduction of hole per well.

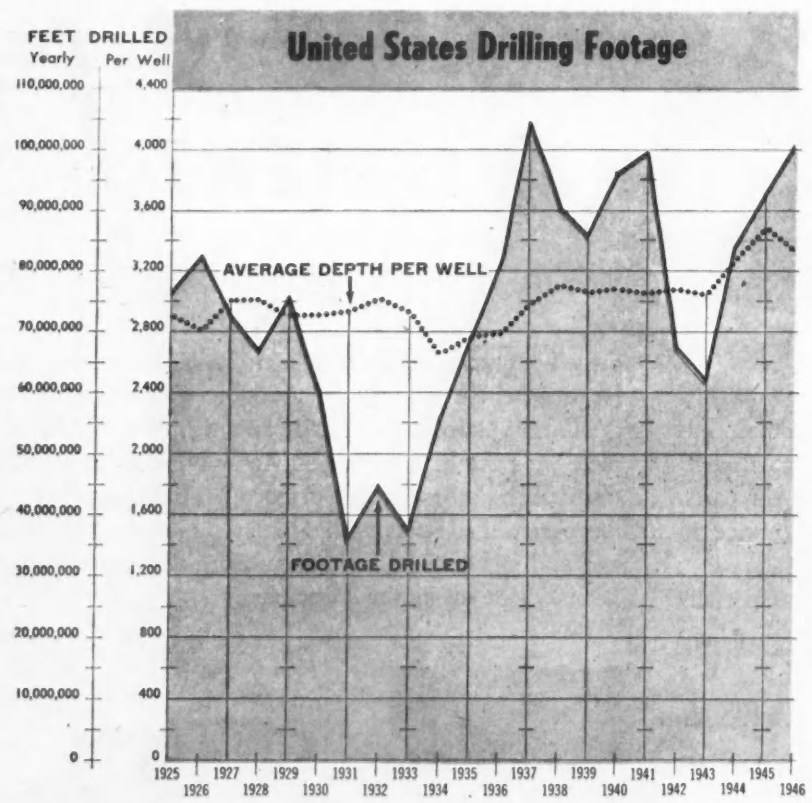
Sizeable decreases in average depths to which the bit penetrated were accounted for by the following states: Arkansas, down to 3954 average from 4367 feet in 1945; Louisiana, averaging 6174 against 7207 in 1945; Oklahoma, down in 1946 to 3195 from 4037; Texas, averaging 4358 for 1946 against 4485 for 1945; and Wyoming, with 4164 against a 1945 figure of 4535.

On the other side of the record were the following increases in average depths per well: California, up to 4359 against a 1945 figure of 4135; Indiana, 1793 against 1593; Mississippi, 7426 compared with 6632 in 1945; New Mexico up from 3653 in 1945 to 3899 feet; Ohio, 2588 against 2528; and West Virginia with 2789 against 2688 feet per well in 1945. Other areas averaged close to the previous year's figure, with the trend in most instances toward slightly deeper wells.

The greatest depth per well completed was Mississippi's 7426 feet, followed by Florida with 6607 feet per well. Maryland reported an average depth of 7710 feet, but recorded only 1 completion.

Only Tennessee and Missouri, drilling between them 36 wells, showed an average of less than 1000 feet per well, the figure there being only 811 feet per well for Missouri against 809 for Tennessee. New York, with an average depth of 1407 feet, had the shallowest drilling of states contributing appreciably to the country's oil totals.

Footage and average depths drilled in the U. S. in 1945 and 1946 by states appear on page 121.



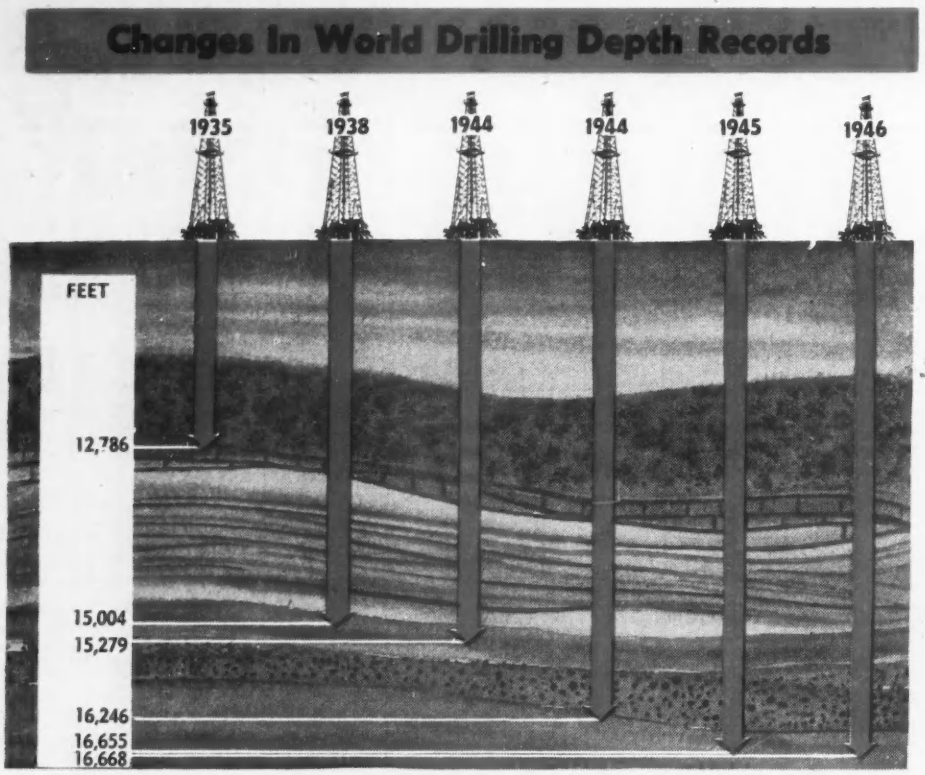
YEAR	New Wells Completed	Footage Drilled	Average Depth Per Well	YEAR	New Wells Completed	Footage Drilled	Average Depth Per Well
1925...	26,412	76,594,800	2,900	1936..	28,962	80,996,816	2,797
1926...	29,456	82,476,800	2,800	1937..	35,045	104,733,341	2,989
1927...	24,089	72,267,000	3,000	1938..	29,127	90,585,158	3,110
1928...	22,232	66,696,000	3,000	1939..	28,012	85,523,094	3,053
1929...	26,069	75,600,100	2,900	1940..	31,149	96,182,605	3,088
1930...	20,827	60,398,300	2,900	1941..	32,510	99,347,714	3,056
1931...	12,233	35,769,292	2,924	1942..	21,990	67,903,053	3,088
1932...	14,910	44,894,010	3,011	1943..	20,349	61,991,857	3,046
1933...	12,765	37,350,390	2,926	1944..	25,786	84,378,457	3,272
1934...	21,122	56,141,433	2,658	1945..	26,649	92,982,113	3,489
1935...	24,851	67,844,939	2,760	1946..	30,221	101,010,551	3,342

Data for Old Wells Drilled Deeper not included in above statistics. Source: Records o THE OIL WEEKLY.

Footage and Average Depths Drilled in All Wells in the United States in 1946

STATE OR DISTRICT	OIL			GAS			DISTILLATE			DRY			WATER INPUT			GAS INPUT		
	Wells	Footage	Average Depth	Wells	Footage	Average Depth	Wells	Footage	Average Depth	Wells	Footage	Average Depth	Wells	Footage	Average Depth	Wells	Footage	Average Depth
Alabama	3	9,853	3284	.....	.....	....	.....	.....	....	14	59,528	4252	.....	.....	....	.....	.....	....
Arizona	.....	.....	....	.....	.....	....	.....	.....	....	2	6,259	3130	.....	.....	....	.....	.....	....
Arkansas	106	437,327	4116	5	19,633	3927	3	22,226	7409	87	315,656	3640	.....	.....	....	.....	.....	....
California	1447	6,088,841	3208	56	238,848	4265	.....	.....	....	320	1,435,557	4486	.....	.....	....	.....	.....	....
Colorado	157	1,011,010	6440	2	15,553	7777	.....	.....	....	17	88,940	5232	.....	.....	....	.....	.....	....
Florida	2	23,154	11577	.....	.....	....	.....	.....	....	25	155,224	6209	.....	.....	....	.....	.....	....
Georgia	.....	.....	....	.....	.....	....	.....	.....	....	2	8,441	4221	.....	.....	....	.....	.....	....
Illinois	1344	3,407,496	2535	8	9,408	1176	.....	.....	....	988	2,516,064	2547	1	1,573	1573	.....	.....	....
Indiana	276	493,408	1788	26	25,829	933	.....	.....	....	210	393,583	1898	.....	.....	....	.....	.....	....
Iowa	.....	.....	....	.....	.....	....	.....	.....	....	.....	.....	....	.....	.....	....	.....	.....	....
Kansas	1130	3,657,496	3237	306	878,733	2872	.....	.....	....	669	2,291,955	3426	.....	.....	....	.....	.....	....
Kentucky	325	528,573	1626	226	462,361	2046	.....	.....	....	301	506,694	1683	.....	.....	....	.....	.....	....
Louisiana	774	4,468,758	5774	100	480,497	4805	72	671,527	9327	467	3,085,411	6607	.....	.....	....	3	28,978	9659
North Louisiana	441	1,579,502	3582	93	406,245	4368	24	180,832	7535	247	1,064,335	4309	.....	.....	....	1	8,255	8255
South Louisiana	333	2,889,256	8676	7	74,252	10607	48	490,695	10223	220	2,021,076	9187	.....	.....	....	2	20,723	10362
Maryland	.....	.....	....	.....	.....	....	.....	.....	....	1	7,710	7710	.....	.....	....	.....	.....	....
Michigan	238	619,419	2603	94	140,414	1494	1	5,037	5037	436	972,906	2231	.....	.....	....	12	15,815	1318
Mississippi	141	1,077,773	7644	16	139,340	8709	3	29,036	9679	103	706,832	6862	.....	.....	....	.....	.....	....
Missouri	7	1,808	258	4	1,431	358	.....	.....	....	23	24,328	1058	.....	.....	....	.....	.....	....
Montana	151	351,129	2325	20	46,230	2312	.....	.....	....	82	214,982	2622	5	10,092	2018	.....	.....	....
Nebraska	.....	.....	....	.....	.....	....	.....	.....	....	5	12,799	2560	.....	.....	....	.....	.....	....
New Mexico	308	1,276,432	4144	43	113,966	2650	.....	.....	....	91	332,791	3657	.....	.....	....	.....	.....	....
New York	719	970,931	1350	9	34,480	3831	.....	.....	....	18	73,100	4061	406	542,388	1336	.....	.....	....
North Carolina	.....	.....	....	.....	.....	....	.....	.....	....	5	26,173	5235	.....	.....	....	.....	.....	....
North Dakota	.....	.....	....	.....	.....	....	.....	.....	....	.....	.....	....	.....	.....	....	.....	.....	....
Ohio	365	843,195	2310	537	1,534,290	2857	.....	.....	....	410	1,017,738	2482	.....	.....	....	1	3,370	3370
Oklahoma	1798	5,923,462	3294	216	723,874	3351	3	24,159	8053	1102	3,385,674	3072	.....	.....	....	46	75,439	1640
Oregon	.....	.....	....	.....	.....	....	.....	.....	....	2	17,148	8574	.....	.....	....	.....	.....	....
Pennsylvania	1583	2,553,138	1613	611	1,273,108	2084	.....	.....	....	229	488,656	2134	1392	2,227,200	1600	228	460,800	1600
South Dakota	.....	.....	....	.....	.....	....	.....	.....	....	3	8,038	2679	.....	.....	....	.....	.....	....
Tennessee	.....	.....	....	.....	.....	....	.....	.....	....	2	1,618	1618	.....	.....	....	.....	.....	....
Texas	4870	22,221,654	4563	471	2,295,623	4874	124	928,390	7487	2709	10,273,191	3792	12	20,432	1703	30	78,653	2622
E. Texas Border Co.'s	42	155,343	3699	128	827,224	6463	3	19,608	6536	21	129,397	6162	.....	.....	....	.....	.....	....
Rest of East Texas	359	1,836,732	5116	19	109,075	5741	2	15,020	7510	135	695,902	5155	.....	.....	....	1	5,861	5861
North Texas	1210	3,399,452	2809	15	52,115	3474	.....	.....	....	1003	2,386,857	2380	8	8,486	1048	20	31,376	1569
West Central Texas	258	658,228	2551	31	81,034	2614	.....	.....	....	356	985,069	2767	1	1,638	1638	1	1,970	1970
West Texas	1519	7,641,188	5030	17	49,796	2929	.....	.....	....	287	1,346,648	4692	1	2,988	2988	1	2,953	2953
Texas Panhandle	160	483,716	3023	131	393,312	3002	.....	.....	....	46	150,692	3276	1	6,145	6145	2	6,599	3300
Gulf Coast, Upper	346	2,398,943	6933	28	190,047	6787	45	426,601	9480	258	1,871,615	7254	.....	.....	....	2	14,510	7255
Gulf Coast, Lower	751	4,789,842	6378	69	482,395	6991	63	416,217	6607	248	1,542,904	6221	.....	.....	....	2	10,096	5048
Southwest Texas	161	581,391	3611	30	100,617	3354	9	37,546	4172	241	796,419	3305	1	1,275	1275	1	5,288	5288
South Central Texas	64	276,819	4325	3	10,008	3336	2	13,398	6699	114	367,688	3225	.....	.....	....	.....	.....	....
Utah	1	1,215	1215	.....	.....	....	.....	.....	....	4	13,114	3279	.....	.....	....	.....	.....	....
Virginia	.....	.....	....	.....	.....	....	.....	.....	....	2	5,370	2686	.....	.....	....	.....	.....	....
Washington	.....	.....	....	.....	.....	....	.....	.....	....	1	6,230	6230	.....	.....	....	.....	.....	....
West Virginia	101	190,055	1882	541	1,607,631	2972	.....	.....	....	139	380,220	2735	.....	.....	....	.....	.....	....
Wyoming	116	477,315	4115	12	66,434	5536	1	12,895	12895	34	122,146	3593	.....	.....	....	.....	.....	....
Total United States	15,962	56,632,442	3548	3303	10,107,-683	3060	207	1,693,270	8180	8503	28,960,076	15558	1816	2,801,685	1543	380	663,055	1745

STATE OR DIST.	SALT WATER DISPOSAL			TOTAL NEW WELLS (Preceding Classes) 1946			TOTAL NEW WELLS (Preceding Classes) 1945			OLD WELLS DRILLED DEEPER 1946 (Productive and Dry)			TOTAL ALL WELLS 1946			TOTAL ALL WELLS 1945		
	Wells	Footage	Average Depth	Wells	Footage	Average Depth	Wells	Footage	Average Depth	Wells	Footage	Average Depth	Wells	Footage	Average Depth	Wells	Footage	Average Depth
Alabama	.....	.....	....	17	69,381	4081	38	151,088	3976	.....	.....	....	17	69,381	4081	38	151,088	3976
Arizona	.....	.....	....	2	6,259	3130	3	7,190	2397	.....	.....	....	2	6,259	3130	3	7,190	2397
Arkansas	.....	.....	....	201	794,842	3954	198	864,651	4367	2	170	85	203	795,012	3916	200	864,831	4324
California	.....	.....	....	1823	7,763,246	4259	2078	8,592,398	4135	74	96,879	1309	1897	7,860,125	4143	2090	8,599,049	4114
Colorado	.....	.....	....	176	1,115,503	6338	53	323,492	6104	.....	.....	....	176	1,115,503	6338	53	323,492	6104
Florida	.....	.....	....	27	178,378	6607	15	98,395	6560	.....	.....	....	27	178,378	6607	15	98,395	6560
Georgia	.....	.....	....	2	8,441	4221	6	19,502	3250	.....	.....	....	2	8,441	4221	6	19,502	3250
Illinois	1	2,135	2135	2342	5,936,676	2535	1778	4,601,038	2588	37	11,903	322	2379	5,948,579	2500	1908	4,617,600	2420
Indiana	.....	.....	....	512	917,820	1793	322	512,970	1593	10	5,016	502	522	922,836	1768	332	515,551	1553
Iowa	.....	.....	....	.....	.....	....	1	1,250	1250	.....	.....	....	.....	.....	....	1	1,250	1250
Kansas	22	72,262	3285	2127	6,900,446	3244	1683	5,516,879	3278	94	19,492	207	2221	6,919,938	3116	1757	5,533,962	3150
Kentucky	1	2,290	2290	853	1,499,918	1758	715	1,360,173	1902	8	2,860	350	861	1,502,778	1745	722	1,360,971	1885
Louisiana	2	20,108	10054	1418	8,755,279	6174	1081	7,791,075	7207	4	7,389	1847	1422	8,762,668	6162	1087	7,798,605	7430
North Louisiana	1	8,178	8178	807	3,247,347	4024	457	2,094,342	4583	3	5,439	1813	810	3,252,786	4016	459	2,097,495	4570
South Louisiana	1	11,930	11930	611	5,507,932	9015	624	5,696,733	9129	1	1,950	1950	612	5,509,882	9003	628	5,701,110	9078
Maryland	.....	.....	....	1	7,710	7710	1	7,178	7178	.....	.....	....	1	7,710	7710	1	7,178	7178
Michigan	.....	.....	....	781	1,753,591	2245	761	1,968,757	2587	4	3,127	782	785	1,756,718	2238	763	1,970,173	2582
Mississippi	.....	.....	....	263	1,952,981	7426	368	2,440,715	6632	3	921	307	266	1,953,902	7346	369	2,440,887	6615
Missouri	.....	.....	....	34	27,567	811	44	48,894	1111	.....	.....	....	34	27,567	811	48	50,064	1043
Montana	.....	.....	....	258	622,433	2413	354	850,060	2401	5	1,235	247	263	623,668	2371	354	850,060	2401
Nebraska	.....	.....	....	5	12,799	2560	7	25,246	3607	.....	.....	....	5	12,799	2560	7	25,246	3607
New Mexico	.....	.....	....	442	1,723,189	3899	423	1,545,223	3653	21	38,371	1827	463	1,761,560	3805	425	1,546,558	3639
New York	.....	.....	....	1152	1,620,899	1407	1155	1,643,877	1423	1	3	3	1153	1,620,902	1406	1155	1,643,877	1423
North Carolina	.....	.....	....	5	26,173	5235	1	4,044	4044	.....	.....	....	5	26,173	5235	1	4,044	4044
North Dakota	.....	.....	....	.....	.....	....	7	9,700	1386	.....	.....	....	.....	.....	....	7	9,700	1386
Ohio	.....	.....	....	1313	3,398,593	2588	1021	2,581,504	2528	13	8,584	660	1326	3,407,177	2570	1023	2,581,679	2524
Oklahoma	14	25,125	1795	3179	10,157,733	3195	2296	9,268,557	4037	122	44,204	362	3301	10,201,937	3091	2351	9,290,920	3952
Oregon	.....	.....	....	2	17,148	8574	1	5,924	5924	.....	.....	....	2	17,148	8574	1	5,924	5924
Pennsylvania	.....	.....	....	4013	7,002,902	1707	3982	7,124,754	1789	40	41,053	1026	4143	7,043,955	1700	4000	7,139,363	1785
South Dakota	.....	.....	....	3	8,038	2679	3	7,503	2501	.....	.....	....	3	8,038	2679	3	7,503	2501
Tennessee	.....	.....	....	2	1,618	809	6	10,913	1819	.....	.....	....	2	1,618	809	6	10,913	1819
Texas	10	30,420	3042	8226	35,848,363	4358	7278	32,638,758	4485	156	75,251	482	8382	35,923,614	4286	7409	32,696,651	4413
E. Tex. Bor. Co.'s	.....	.....	....	194	1,131,572	5833	128	827,434	6464	.....	.....	....	194	1,131,572	5833	128	827,434	6464
Rest of East Texas	4	16,089	4022	520	2,678,679	5151	263	1,589,668	6044	4	5,088	1272	524	2,683,767	5122	268	1,595,817	5955
North Texas	5	5,146	1029	2261	5,883,332	2602	1830	4,551,718	2487	30	16,111	537	2291	5,899,443	2575	1850	4,565,272	2468
West Cent Texas	.....	.....	....	647	1,727,939	2671	471	1,298,298	2756	20	7,574	379	667	1,735,513	2602	482	1,305,343	2708
West Texas	.....	.....	....	1825	9,043,573	4955	1680	8,287,958	4933	45	15,182	377	1870	9,058,755	4844	1732	8,306,354	4796
Texas Panhandle	.....	.....	....	340	1,040,464	3060	561	1,774,284	3163	28	2,089	75	368	1,042,553	2883	588	1,776,791	3022
Gulf Coast, Upper	1	9,185	9185	680	4,910,901	7222	706	5,172,618	7372	.....	.....	....	680	4,910,901	7222	713	5,176,679	7260
Gulf Coast, Lower	.....	.....	....	1133	7,241,454	6391	1070	6,815,703	6370	22	27,811	1264	1155	7,269,265	6294	1077	6,821,771	6334
Southwest Texas	.....	.....	....	443	1,522,536	3437	474	1,878,811	3964	7	1,396	199	450	1,523,932	3387	476	1,878,924	3947
South Central Tex.	.....	.....	....	183	667,913	3650	95	442,266	4655	.....	.....	....	183	667,913	3650	95	442,266	4655
Utah	.....	.....	....	5	14,329	2866	4	5,080	1270	.....	.....	....	5	14,329	2866	4	5,080	1270
Virginia	.....	.....	....	2	5,370	2685	1	802	802	.....	.....	....	2	5,370	2685	1	802	802
Washington	.....	.....	....	1	6,230	6230	4	14,783	3696	.....	.....	....	1	6,230	6230	4	14,783	3696
West Virginia	.....	.....	....	781	2,177,906	2789	768	2,064,454	2688	25	12,281	491	806	2,190,187	2717	803	2,091,114	2604
Wyoming	.....	.....	....	163	678,790	4164	193	875,286	4535	.....	.....	....	163	678,790	4164	193	875,286	4535
Total U.S.	50	152,340	3047	30,221	101,010,551	3342	26,649	92,982,113	3489	619	368,739	596	30,840	101,379,290	3287	27,140	93,159,291	3433



Drilling And Producing Depth Marks Broken

New world records for both producing and drilling depths, and many district records established in 1946

WORLD drilling and producing depth records were once again shattered in the U. S. during 1946. As operators continued to search deeper for more oil reserves, new drilling and production marks also were established in numerous states and districts.

The world's drilling depth record was transferred from Texas to California when the old mark was bested by 13 feet to a total of 16,668 feet, surpassing the 1945 record of 16,655 feet.

The producing depth record remained in South Louisiana but was pushed 528 feet deeper to 13,778 feet as compared with the old mark of 13,250 feet.

The 16,668-foot deep drilling mark was established late in 1946 by a test drilled by Pacific Western Oil Corporation in the Miramonte area, Kern County, California. The test was halted in Miocene formation. The previous record of 16,655 feet was held by Phillips Petroleum Company's test in Brazos County, Upper Texas Coast, now in the runner-up position.

Deepest Producer

Shell Oil Company's second test in the Weeks Island field, Iberia Parish, South Louisiana, was completed early in the year at the new record producing depth of 13,778 feet. The discovery well for this field, completed in 1945, produces from 13,250 feet in the Miocene formation and is still the second deepest producer in the world.

States where tests have been drilled to 10,000 feet now total 17, an increase of two over 1945. States in which the first 10,000-foot tests were drilled during 1946 were Montana and North Carolina, the latter a non-producing state.

Outside of Texas and California, the deepest state drilling record is Oklahoma's 16,350 feet and Louisiana's 14,577 feet. Both these records were made in 1946 with Oklahoma becoming the third state where 16,000-foot tests have been drilled.

These state records are followed in order by New Mexico with 13,998 feet, Florida with 13,512 feet, Wyoming with 12,894 feet, Mississippi with 12,843 feet, Colorado with 12,702 feet, Alabama with 12,399 feet, and Arkansas with 11,137 feet. Other states where 10,000-foot tests have been drilled include Michigan, North Dakota, Montana, Pennsylvania, North Carolina, and West Virgina.

State and district drilling and producing depth records appear on page 125.

Eleven states or districts received new drilling depth marks during 1946, the same number as last year. Other than California, Oklahoma, Louisiana, Montana and North Carolina, new records were set in the Lower Texas Coast where the depth was advanced to 14,671 feet. In East Texas, the record was pushed deeper to 13,781 feet, while Wyoming's new record is 12,894 feet. On the East Texas Border the mark was advanced to 12,221 feet and Indiana's deepest test reached 6408 feet. Western Kentucky's new mark is 6117 feet.

With the exception of a few scattered areas, all states have received new deep drilling records since 1940.

10,000-Foot Producers

The number of states having wells flowing from below 10,000 feet was advanced one during 1946 and now total eight. The newest 10,000-foot producing state is Wyoming where production was ectablished at 10,721 feet during the year.

Outside of Louisiana and California, the deepest producing sector is New Mexico, where the depth is 11,928 feet. Texas' deepest producing area is the Upper Texas Coast where wells flow from as deep as 11,805 feet.

Mississippi, with 11,772 feet, and Oklahoma, with 11,736 feet, are next in line. Both of these marks were established during 1946. Florida has production at 11,626 feet, while on the Lower Texas Coast production depth has reached 11,192 feet. North Louisiana now produces from 10,740 feet, a new 1946 mark, and East Texas has production from 10,312 feet. Arkansas' deep producing record remains at 9320 feet, while South Central Texas saw its mark advanced to 9018 feet.

West Virginia's record was pushed to 8410 feet during the year, while the East Texas Border's new depth of 7586 was another accomplishment.

Missouri continues to hold the shallowest producing depth record of any state. Deepest production in that state is 1444 feet and was established in 1940. This is followed by Tennessee's 1617 feet.

Pennsylvania's producing depth record was advanced to 8625 feet during the year, an increase of 175 feet. Ohio's record of 5072 feet was also established during the year.

Drilling Depth Records in U. S., by States and Districts

State or District	Feet	Year	Formation	Well, Location and Remarks
California	16,668	1946	Miocene	Pacific Western Oil Corp.'s National Royalties 1, Sec. 5-26s-22e, Miramonte Area, Kern County
Upper Texas Coast	16,655	1945	L. Cretaceous	Phillips Petroleum Company's Schoeps 3, Millican salt dome area, Brazos County.
Oklahoma	16,350	1946	Pennsylvanian	Superior Oil Company of California's Weller 51-11, Caddo County. Still Drilling.
Southwest Texas	15,301	1945	L. Cretaceous	Quintana Petroleum Company's South Texas Syndicate 3-D, McMullen County.
West Texas	15,279	1944	Ellenburger	Phillips Peroleum Company's Ada Price 1, T. C. Railway survey, Pecos County.
Lower Texas Coast	14,671	1946	Frio	The Texas Co.'s Yturria L & L Co. 6, Willacy County. Still drilling at year end.
South Louisiana	14,577	1946	Miocene	The Texas Company's State-Barataria Bay 2, Jefferson Parish.
New Mexico	13,998	1945	Ordovician	Phillips Petroleum Company's State-Lea-Mex. 4, Maljamar area, Lea County.
East Texas	13,781	1946	Cotton Valley	Phillips Petroleum Company's Englander 1, Don T. Quevado survey, Smith County.
Florida	13,512	1944	Lime	Humble O. & R. Company's Gulf Coast Realty 2, Sunniland field, Collier County.
North Louisiana	12,952	1942	Smackover	Union Producing Company's McDonald Unit 1, North Lisbon field, Claiborne Parish.
Wyoming	12,894	1946	Morrison	Mountain Fuel Supply Co.-Union Pacific R.R. 1, Church Butte, Uinta County.
Mississippi	12,843	1943	Glen Rose	California Company's Smith et al 1, Brookhaven area, Lincoln County.
Colorado	12,702	1945	Dolomite	Texas Company-California Company's Unit 20, Wilson Creek field, Rio Blanco County.
Alabama	12,399	1941	Jurassic	Union Producing Company's Waite 1, Sec. 27-8n-1e, Clarke County.
East Texas Border	12,221	1946	Smackover	Humble Oil & Refining Co.'s Pickering Lumber Co. 1, Huxley field, Shelby County.
North Texas	11,710	1946	Simpson	Denver Producing & Refining Co.'s Rich 1, Grayson County. Still Drilling at Year End.
Arkansas	11,137	1944	Eagle Mills	Union Producing Co.'s Crossett Lumber Company E-1, 12-19-7, Ashley County.
South Central Texas	11,042	1942	Edwards Lime	Quintana Petroleum Corporation's Washburn 3-A, Washburn field, La Salle County.
Michigan	10,447	1941	St. Peters	Gulf Refining Company's Bateson 1, 2-14n-4e, Bay County.
North Dakota	10,281	1938	.....	California Company's Kamp 1, Nesson Anticline, Williams County.
Montana	10,102	1946	Madison	Carter Oil Company and Phillips Petroleum Company's Weaselhead-Allot No. 1, Glacier County.
Pennsylvania	10,096	1944	U'per Cambrain	Manufacturers Light & Heat Co.'s. Hockenberry 1, Mercer Township, Butler County.
North Carolina	10,054	1946	Basement Rocks	Standard Oil Company of New Jersey's Cape Hatteras 1.
West Virginia	10,018	1941	Queenston	Hope Natural Gas Co.'s Gribble 1, Grant District, Harrison County.
New York	8,626	1944	Oswego	New Penn Development Company's Harrington 1, Woodhull Township, Steuben County.
Texas Panhandle	8,502	1945	Conglomerate	Sinclair Prairie Oil Co.'s J. B. Henderson 1, H.& G.N. Railway 16, Block A-8, Wheeler County.
Maryland	8,165	1941	Helderburg	Wm. Snee's Schartzer 1, Accident district, Garrett County.
West Central Texas	7,980	1945	Ellenburger	Humble Oil & Refining Co.'s C. H. Tompkins 1, T. & P. Railway 169, Parker County.
Kansas	7,921	1945	Arbuckle	Stanolind Oil & Gas Company's Adams 1, Adams Ranch pool, Meade County.
South Dakota	7,918	1939	.....	South Dakota State Royalty Company's State 1, Camp Crook, Harding County.
Ohio	7,889	1933	Clinton	Sylvania Production Co.'s Knowlton 1, Independence Township, Washington County.
Georgia	7,320	1944	Granite	Mont Warren-Ray Robinson's Chandler 1, Land District 26, Early County.
Illinois	7,207	1940	St. Peter	Pure Oil Company's Billington 3, 26-1n-7e, Clane field, Wayne County.
Nebraska	6,846	1938	Pennsylvanian	Union Oil Company of California's Agate 15, Sioux County.
Indiana	6,408	1946	Trenton	Continental Oil Company's Cooper 1-D, Section 13-35-14w.
Western Kentucky	6,117	1946	Granite	California Oil Company's Spears 1, Section 13-L-57, Lincoln County.
Eastern Kentucky	5,743	....	Red Medina	Columbian Fuel Corporation's Ford Motor Company 1, Pike County.
Iowa	5,305	1930	Cambrian	Oil Development Company's Wilson 1, Page County.
Missouri	4,740	1941	Cambrian	Strake Petroleum Company's T. P. Russell 1, Pemiscot County.
Tennessee	4,235	1932	Knox Dolomite	Sequatchie Gas Company's Sewanee Fuel & Iron Company 1, Grundy County.

Producing Depth Records in U. S., by States and Districts

State or District	Feet	Year	Formation	Well, Location and Remarks
South Louisiana	13,778	1946	Miocene	Shell Oil Company's Smith-State 2, Weeks Island field, Iberia Parish.
California	13,175	1938	Miocene	Continental's KCL A-2, Wasco field, Kern County.
West Texas	11,955	1946	Ellenburger	Placid Oil Company-Gulf Oil Corporation's Thornberry 1, Fuhrman-Mascho-Ellenburger field.
New Mexico	11,928	1944	Ellenburger	Humble O. & R. Company's Leonard-Gov. 1, Dublin field, Lea County. Deepest oil production in state.
Upper Texas Coast	11,805	1943	Wilcox	Superior Oil Company's South Texas Development Company 1, Lake Creek field, Montgomery County.
Mississippi	11,772	1946	Paluxy	California's Ella G. Lees 9, Cranfield field, Adams County, gasser.
Oklahoma	11,736	1946	Pennsylvanian	Magnolia Petroleum Company's Spiers 1, Chitwood pool, Grady County.
Florida	11,626	1943	Glen Rose	Humble O. & R. Company's Gulf Coast Realty 1, Sunniland field, Collier County.
Lower Texas Coast	11,192	1945	Wilcox	Sun Oil Company's R. A. Thompson 1, West Goliad field, Goliad County.
North Louisiana	10,740	1946	Smackover li	Ohio Oil Company's 1, W. E. Deloach 3-H, Haynesville field, Claiborne Parish.
Wyoming	10,721	1946	Embar	Pure Oil Company's No. 2 Unit, River Dome, Washakie County.
East Texas	10,312	1942	Pettit	Humble Oil & Refining Company's Curtis 1, Larissa field, Cherokee County.
Arkansas	9,320	1944	Smackover li	Tide Water Associated Oil-Seaboard Oil Co.'s Bendaw 1, Patton field, Lafayette County.
South Central Texas	9,018	1946	Edwards Lime	Quintana Petroleum Corporation's C. Muil 3, Muil field, Atascosa County.
New Mexico	8,875	1945	Paradox	So. Union Gas Co.'s Barker-Ute Indian 11, Barker Dome field, San Juan County, deepest gas prod. in state.
Pennsylvania	8,625	1946	Oriskany	Railway Steel Spring Co.'s L. C. Steiner 1, Unity Township, Westmorlenad County.
Colorado	8,558	1943	Dakota-Lakota	Superior Oil Company's Unit 1, Douglas Creek, Rio Blanco County.
West Virginia	8,410	1946	Oriskany	Ohio Oil Company's Kuykendall et al, 1, Dry Fork District, Tucker County.
Michigan	7,850	1941	Salina	Gulf Refining Co.'s Bateson 1, 2-14n-4e, Bay County, now abandoned. Current deepest producing well is: Pure Oil Co.'s Freer 1, 18-17n-6w, Clare County, gas/distillate well, producing from Richfield zone at 5100 feet.
East Texas Border	7,586	1946	Travis Peak sd.	Magnolia's S. L. Orr 1, Lassater field discovery, Marion County.
North Texas	7,415	1945	Basal Strawn	Magnolia Petroleum Company's Joe Dillard 1, Sivels Bend field, Cooke County.
South West Texas	6,922	1944	Wilcox	Edwin M. Jones' Ezzell C-2, San Caja field, McMullen County.
Kansas	6,485	1936	Viola Lime	Olson Drilling Company's Morrison 3, Morrison pool, Clark County.
Montana	6,182	1945	Tensleep	Stanolind O. & G. Company-Dengler Government 2, Elk Basin field, Carbon County.
West Central Texas	6,065	1940	Mississippian	J. D. Sandefer Jr., et al (was Shell Oil Co.'s) T. K. Smith 1, Aspermont pool, Stonewall County.
Ohio	5,820	1941	Clinton	East Ohio Gas Company's W. L. Phillips 2, Washington Township, Harrison County, deepest gas producer
New York	5,200	1938	Oriskany	New York State Natural Gas Company's Carr 1, West Union Township, Steuben County.
Eastern Kentucky	5,170	1932	Devonian Shale	United Carbon's Howe 1, Pike County, deepest gas producer.
Ohio	5,072	1946	Clinton	Belden et al S. S. Fry 2, Pike Township, Stark County, deepest oil producer.
Illinois	4,780	1943	Trenton	Kingwood Oil Company's Shanafelt 24-A, Salem pool, Marion County.
Eastern Kentucky	4,523	....	Devonian Shale	Columbian Fuel Corporation's Semet-Solvay Coal Co. 1, Pike County, deepest oil producer.
Texas Panhandle	3,830	1929	Permian	Canadian River Gas Company's Bivens 9-A, Hartley County, gas producer.
Alabama	3,624	1945	Eutaw	Hunt Oil Company's Robert Land 4, Gilbertown field, Choctaw County.
Indiana	2,928	1941	McClosky	J. S. Robert's Keck 1, 34-3s-14w.
Nebraska	2,900	1942	Hunton	Skelly Oil Company's Wiltse 1, Dawson pool, Richardson County.
Western Kentucky	2,840	1944	McClosky	Ashland Oil & Refining Company's Johnson 2, 13-0-12, Raleigh pool, Union County.
Tennessee	1,617	1920	Knox Dolomite	Harbor Oil Company's Sells 1, Pickett County.
Missouri	1,444	1940	Bartlesville	Cities Service Oil Company's Jim Cook 1, Tarkio pool, Atchison County.

Smaller Firms Drilled Three-Fourths of Wells

THE important part smaller companies and independent operators play in the search for and development of oil in the U. S. is further emphasized by 1946 drilling records. These smaller firms and individual operators drilled over three-fourths of the nation's total wells and even a higher ratio of wildcats.

During the year there were 30,221 wells completed in the U. S. and of this total 23,118 or 76.5 percent, were drilled by the smaller companies and operators. The other 7103 wells or 23.5 percent of the total were completed by the 37 larger companies listed in the accompanying table, which includes most of the "major" companies and several of the more active independents.

An even larger proportion of the year's exploratory drilling was accounted for by the smaller concerns. Of the 4830 exploratory wells completed, they drilled 3801 or 78.7 percent. These figures are for all types of exploratory wells, including outpost or extension attempts, deeper pay tests as well as those drilled in strict wildcat territory.

In the drilling of entirely unproven areas, or strict wildcat drilling, the smaller operators did their biggest share. These wildcats totaled 4206, and the smaller operators drilled 3409 or 81.1 percent, while the 37 large companies accounted for 797 or 18.9 percent.

This intensive search for oil and gas reserve additions by the smaller companies was carried on under the handicap of a lower success percentage than the majors compiled. While the smaller concerns drilled 78.7 percent of the total exploratory wells they could account for only 66.8 percent of those that were productive. The 37 major companies, while completing only 21.3 percent of the total, provided 33.2 percent of the producers.

Although the smaller concerns and independent operators drilled 81.1 percent of all strict wildcats, they were rewarded for their efforts by only 74.8 percent of the new field discoveries, while the 18.9 percent drilled by the larger firms netted them 28.2 percent of the discoveries.

Several reasons for this success differential between the larger and the smaller

Total and Exploratory Wells Drilled in U. S. in 1946 By Some Larger Companies and Rest of Industry

(Statistical data presented here compiled from The Oil Weekly's completion and exploratory drilling records. Partnership well is ascribed to company whose name is first on drilling report, this precedence usually signifying predominant interest. This procedure tends to compensate, furthermore, for other partnership wells of a company in which its name does not appear first. Because of these and other factors, these figures cannot be expected to agree with the records of the companies included.)

COMPANY	All New Wells Completed		Total Explo. Wells Comp. in 1945	Exploratory Wells Completed in 1946					CLASS OF PRODUCTION PROVED IN 1946									Strict Wildcats Comp. in 1945	‡Strict Wildcats Completed in 1946				
				Total		†Dry	*Productive		Oil			Distillate			Gas				Total		Dry	Productive	
	1945	1946		Number	% of All Wells		Number	% of Total Explo-ratory	New Fields	New Pays	Extensions	New Fields	New Pays	Extensions	New Fields	New Pays	Extensions		Number	% of All Wells		Number	% of Total Strict Wildcats
Amerada Pet. Corp.	147	157	34	29	18.5	27	2	6.9	2									30	28	17.8	26	2	7.1
Atlantic Ref. Co.	95	94	21	23	24.5	13	10	43.5	1	4	1	2	1		1			19	14	14.9	10	4	28.6
Barnsdall Oil Co.	61	62	12	14	22.6	10	4	28.6	2			1					1	8	13	21.0	10	3	23.1
California Co.	122	181	17	13	7.2	5	8	61.5	3	1	1	1				2		16	8	4.4	4	4	50.0
Carter Oil Co.	182	230	35	27	11.7	19	8	29.6	5	1	2							31	24	10.4	19	5	20.8
Cities Service Oil.	124	216	14	28	13.0	21	7	25.0	2	2	3							14	23	10.6	21	2	8.7
Continental Oil Co.	336	368	49	64	17.4	43	21	32.8	5	6	3	2		1	3	1		42	49	13.3	39	10	20.4
Deep Rock Oil.	59	65	15	9	13.8	5	4	44.4	2		2							13	7	10.8	5	2	28.6
General Pet. Corp.	87	71	12	10	14.1	9	1	10.0			1							11	9	12.7	9		
*Gulf Oil Corp.	603	474	75	32	6.8	23	9	28.1	4	1	3						1	67	23	4.9	19	4	17.4
Hope Natl Gas Co.	51	71		1	1.4	1													1	1.4	1		
Humble O & R Co.	548	731	85	120	16.4	88	32	26.7	7	7	3		8		2	2	3	72	87	11.9	78	9	10.3
Magnolia Pet. Co.	348	406	71	54	13.3	31	23	42.6	8	4	3	2	3	2	1			61	39	9.6	28	11	28.2
Mid-Continent Pet.	123	132	15	18	13.6	12	6	33.3	2	3	1							14	14	10.6	12	2	14.3
Ohio Oil Co.	165	197	25	21	19.6	15	6	28.6	1	1		1	1		2			22	19	17.8	15	4	21.1
Pan American Prod.	59	50	6	9	18.0	4	5	55.6		4	1							5	4	8.0	4		
Phillips Pet. Co.	660	217	54	31	14.3	23	8	25.8	2	4	1			1				46	22	10.1	20	2	9.1
Pure Oil Co.	316	347	57	44	12.7	30	14	31.8	2	4	6	1			1			44	34	9.8	30	4	11.8
Richfield Oil Corp.	82	63	35	17	27.0	16	1	5.9			1							33	16	25.4	16		
Seaboard Oil Co.	33	53	13	19	32.8	17	2	10.5	1				1					12	17	29.3	16	1	5.9
Shell Oil Co.	287	298	51	39	13.1	21	18	46.2	4	9		1	1		2		1	38	27	9.1	20	7	25.9
*Sinclair Oil Corp.	233	181	59	14	7.7	6	8	57.1	2	5	1							53	7	3.9	5	2	28.6
Skelly Oil Co.	196	197	34	24	12.2	15	9	37.5	4	3			1		1			30	20	10.2	15	5	25.0
Sohio Pet. Co.	189	153	42	46	30.1	37	9	19.6	4	1	3				1			39	42	27.5	37	5	11.9
Standard Oil Calif.	523	284	28	22	7.7	20	2	9.1							1		1	28	21	7.4	20	1	4.8
Standard Oil Texas	54	42	9	11	26.2	6	5	45.5		3		1	1					6	7	16.7	6	1	14.3
Stanolind O & G.	306	427	53	63	14.8	39	24	38.1	2	3	4	1				1	13	44	39	9.1	36	3	7.7
Sun Oil Co.	367	259	57	54	20.8	36	18	33.3	3	4	1	2	4		2	1	1	48	43	16.6	36	7	16.3
Sun-C. H. Murphy.	55	122	3	9	7.4	8	1	11.1			1							2	8	6.6	8		
Sunray Oil Co.	54	59	11	2	3.4	1	1	50.0							1			10	2	3.4	1	1	50.0
Superior Oil Calif.	118	128	18	24	18.8	18	6	25.0		4	1		1					15	18	14.1	18		
The Texas Co.	709	432	157	91	21.1	61	30	33.0	7	9	3	1	2		5	3		135	72	16.7	59	13	18.1
Tex. Pacific C. & O.	43	50	5	4	8.0	2	2	50.0		1							1	4	2	4.0	2		
Tide Water Assoc.	168	99	20	13	7.0	2	1	33.3		1								17	11	11.1	11		
Union Oil, Calif.	186	174	26	27	13.1	11	2	15.4		2								22	25	14.4	23	2	8.0
Union Prod. Co.	39	43	5	3	15.5	24	3	11.1	2	1								5	2	4.7	2		
United Prod. Co.	63	55	1															1					
Total 37 Co's.	7,791	7,103	1,224	1,029	14.5	719	310	30.1	77	88	46	16	24	4	23	10	22	1,057	797	11.2	681	116	14.6
(% of U.S. Total)	29.2	23.5	27.1	21.3		18.5	33.2		25.0	42.9	28.8	55.2	57.1	57.1	31.1	34.5	27.2	26.8	18.9		17.9	28.2	
Rest of Industry.	18,858	23,118	3,286	3,801	16.4	3,176	625	16.4	231	117	114	13	18	3	51	19	59	2,889	3,409	14.7	3,114	295	8.7
(% of U.S. Total)	70.8	76.5	72.9	78.7		81.5	66.8		75.0	57.1	71.2	44.8	42.9	42.9	68.9	65.5	72.8	73.2	81.1		82.1	71.8	
Total U. S.	26,649	30,221	4,510	4,830	16.0	3,895	935	19.4	308	205	160	29	42	7	74	29	81	3,946	4,206	13.9	3,795	411	9.8

* In addition to discovery wells of entirely new fields this column includes successful outposts or major extension wells and wells proving new pays, as shown in detail columns to the right. † Besides dry wildcats, this column includes dry outposts and dry new pay tests; however, for whole industry about 97 percent of total shown are strictly wildcats. ‡ Exclusive of all tests seeking new pay zones or attempting to extend known fields. ° Gulf includes Western Gulf; Sinclair includes Sinclair-Prairie, Sinclair—Wyoming.

companies may be advanced. Some of the drilling in strictly wildcat areas by the smaller concerns was done with little or no technical advice or information and often under financial handicap. Some of these ventures were in areas that already had been considered and passed up by the major companies, and made with the aid of "dry hole money" from nearby lease owners. Regardless of the size of the operator, the business of wildcatting is financially risky as borne out by the ratio of success to failure figures.

The year's drilling records show that the 37 larger companies when taken as a whole were less active in both total drilling and exploratory drilling than in the previous year, while the smaller concerns in the aggregate intensified their activities in each category. The smaller firms completed 23,118 wells of all kinds during 1946, against 18,858 wells in the previous year, and 3801 exploratory wells against 3286. On the other hand, the larger companies drilled 7103 total wells compared with 7791 last year, and 1029 exploratory wells against 1224. These figures show that the smaller companies accounted for 76.5 percent of all completions against 70.8 percent last year, and 78.7 percent of exploratory wells compared to 72.9 percent. The majors drilled 23.5 percent of all wells against their 29.2 percent last year, and 21.3 percent of the exploratory against 27.1 percent.

Fewer Rigs Running Than a Year Ago

Well Completions Gain Despite Use of Less Rigs Indicates Return to Prewar Drilling Efficiency

A SMALLER number of rigs were operating in the United States at the start of 1947 than a year ago, when the largest number of rigs were in use since 1941.

The number of rigs, including those rigged up, drilling and shutdown, totaled 4644, a decrease of 107 rigs as compared with January 1, 1946. The use of a smaller number of rigs, although the rate of completing wells has increased, indicates a return toward prewar efficiency, which was to be expected as skilled crewmen returned and new equipment became available to replace worn out units.

Of the 4644 rigs in operation on January 1, 1947, 2951 or 63.5 percent, are of the rotary type, 29 fewer such rigs than being used a year ago. The number of cable tool rigs, 1693, or 36.5 percent, was 78 fewer.

Texas, as usual, had the largest number of rigs in operation, or 1236 rigs, 1086 of which were rotary. This was an increase over last year's total of 1202 rigs. West Texas is still using the largest number of rigs.

Oklahoma, with 495 rigs operating, continued to hold second place but showed a decline from the 1945 total of 529 rigs. Pennsylvania and West Virginia pushed Kansas from third to fifth position in the number of rigs being used.

Rotary and Cable Tool Drilling in the United States, January 1, 1947

(Note: Cable Tool data include spudders and machines.)

STATE OR DISTRICT	DRILLING			RIGS UP			SHUT DOWN			ALL RIGS IN USE (DRILLING, RIGS UP, AND SHUT DOWN)				
										Total Rotary and Cable Tool	ROTARY		CABLE TOOL	
	Rotary	Cable Tool	Total	Rotary	Cable Tool	Total	Rotary	Cable Tool	Total		Total Rotary	Rotary as Percent of Total	Total Cable Tool	Cable Tool as Percent of Total
Alabama	3	1	4	1	....	1	5	1	6	11	9	81.8	2	18.2
Arkansas	22	....	22	....	....	....	5	....	5	27	27	100.0	....	....
California	229	....	229	56	....	56	38	....	38	323	323	100.0	....	....
Colorado	38	2	40	7	....	7	6	3	9	56	51	91.1	5	8.9
Florida	6	....	6	1	....	1	2	....	2	9	9	100.0	....	....
Illinois	190	18	208	11	5	16	10	2	12	236	211	89.4	25	10.6
Indiana	39	5	44	11	2	13	7	1	8	65	57	87.7	8	12.3
Iowa	....	....	....	....	....	....	....	1	1	1	....	....	1	100.0
Kansas	278	34	312	18	3	21	12	2	14	347	308	88.8	39	11.2
Kentucky	34	39	73	10	6	16	5	6	11	100	49	49.0	51	51.0
Louisiana	152	....	152	4	....	4	6	....	6	162	162	100.0	....	....
North Louisiana	48	....	48	1	....	1	6	....	6	55	55	100.0	....	....
South Louisiana	104	....	104	3	....	3	....	....	....	107	107	100.0	....	....
Michigan	17	58	75	3	11	14	1	13	14	103	21	20.4	82	79.6
Mississippi	59	....	59	3	....	3	....	....	....	62	62	100.0	....	....
Missouri	2	2	4	....	....	....	....	1	1	5	2	40.0	3	60.0
Montana	12	16	28	1	3	4	1	14	15	47	14	29.8	33	70.2
Nebraska	....	1	1	....	....	....	1	1	2	3	1	33.3	2	66.7
New Mexico	76	17	93	3	....	3	10	8	18	114	89	78.1	25	21.9
New York	....	72	72	....	12	12	....	20	20	104	....	....	104	100.0
North Carolina	1	....	1	....	....	....	....	....	....	1	1	100.0	....	....
Ohio	....	227	227	....	22	22	....	15	15	264	....	....	264	100.0
Oklahoma	374	77	451	24	6	30	11	3	14	495	409	82.6	86	17.4
Pennsylvania	....	279	279	....	45	45	....	88	88	412	....	....	412	100.0
South Dakota	....	....	....	....	....	....	....	2	2	2	....	....	2	100.0
Texas	970	110	1,080	57	10	67	59	30	89	1,236	1,086	87.9	150	12.1
E. Texas Border	16	....	16	1	....	1	....	....	....	17	17	100.0	....	....
Rest of East Texas	61	....	61	10	....	10	11	....	11	82	82	100.0	....	....
North Texas	181	7	188	14	2	16	9	3	12	216	204	94.4	12	5.6
West Central Texas	43	47	90	5	6	11	10	16	26	127	58	45.7	69	54.3
West Texas	336	56	392	7	2	9	6	11	17	418	349	83.5	69	16.5
*Texas Panhandle	102	....	102	6	....	6	6	....	6	114	114	100.0	....	....
Gulf Coast, Upper	78	....	78	2	....	2	1	....	1	81	81	100.0	....	....
Gulf Coast, Lower	106	....	106	8	....	8	6	....	6	120	120	100.0	....	....
Southwest Texas	26	....	26	3	....	3	2	....	2	31	31	100.0	....	....
South Central Texas	21	....	21	1	....	1	8	....	8	30	30	100.0	....	....
Utah	4	....	4	....	....	....	1	2	3	7	5	71.4	2	28.6
Washington	1	....	1	....	....	....	....	....	....	1	1	100.0	....	....
West Virginia	1	312	313	....	27	27	....	51	51	391	1	.3	390	99.7
Wyoming	47	2	49	5	1	6	1	4	5	60	53	88.3	7	11.7
Total United States	2,555	1,272	3,827	215	153	368	181	268	449	4,644	2,951	63.5	1,693	36.5

* Texas Panhandle operators use rotary down to final casing point and then switch to machine or cable rig unit in drilling in to the oil or gas pay or for completion through casing perforations. However, wildcats do not switch to cable tools unless they find something worth setting pipe and testing.

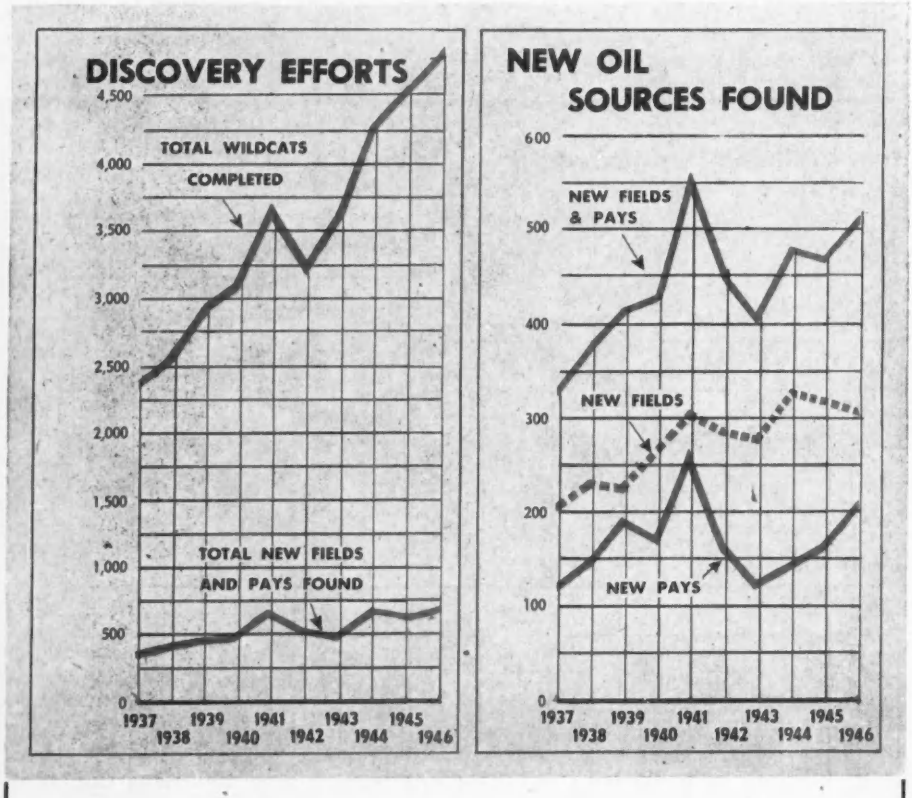
Wildcat Drilling At New Peak

THE determined effort of the petroleum industry of the United States to locate new oil reserves during 1946 is best illustrated by the drilling of a record number of wildcat or exploratory tests. This widespread search for new oil sources resulted in the completion of record numbers of both productive and dry exploratory tests.

During the year 1946, the industry completed a total of 4830 exploratory tests, including outpost attempts, contrasted with 4510 completed in 1945. These rates far exceed those of previous years. Total wildcat completions for the past few years follow:

1944	4325
1943	3631
1942	3175
1941	3697
1940	3164

The 4830 exploratory tests completed in 1946 resulted in the completion of 935 wells that produced either oil, gas or distillate, an all-time peak. In 1945, of the 4510 completions recorded, 877 were productive wells. Therefore, the ratio of successful completions in 1946 was on par with that of the preceding year, both years showing 19 percent of the wildcats to be productive.



YEAR	Total New Oil, Gas and Distillate Sources Found			New Oil Sources Found			New Gas Sources Found			New Distillate Sources Found		
	Total	New Fields	New Pays	Total	New Fields	New Pays	Total	New Fields	New Pays	Total	New Fields	New Pays
1937	376	239	137	322	203	119	48	33	15	6	3	3
1938	423	264	159	373	229	144	42	31	11	8	4	4
1939	473	258	215	414	224	190	55	33	22	4	1	3
1940	492	309	183	428	261	167	62	46	16	2	2	0
1941	650	362	288	562	301	261	83	58	25	5	3	2
1942	523	348	175	451	288	163	57	47	10	15	13	2
1943	499	347	152	403	276	127	72	56	16	24	15	9
1944	633	460	173	475	326	149	117	102	15	41	32	9
1945	647	451	187	475	317	158	128	113	15	44	30	14
1946	687	411	276	513	308	205	103	74	29	71	29	42

Gain In New Pays

The successful completions of 1946 were made up of 687 tests that discovered new oil, distillate and gas fields or pay sands, and 248 extension or outpost completions in proven areas.

The 687 new fields and pays discovered compared with 647 during 1945. New fields totaled 411 in 1946, compared with 460 in 1945. However, new pays discovered in 1946 increased to 276 from 187 the preceding year.

The increased wildcat completions resulted in the discovery of 513 new oil producing fields and new producing pays in previously known fields. This total was made up of 308 new oil fields, a decline of nine from the 317 discovered in 1945, and 205 new pays. The latter discoveries represent a sharp increase from the 158 new pays opened in 1945. Extensions to previously known fields totaled 160 during 1946, a gain of six from 1945.

Distillate discoveries in 1946 totaled 71, including 29 new fields and 42 new pays in old fields. This was a sharp increase over the 44 new distillate sources opened in 1945, which included 30 new fields and 14 new pays.

There was a considerable decline in the number of new gas sources uncovered during 1946. Gas strikes dropped from 128 in 1945 to 103 in 1946. New fields last year totaled 74, down from the 113 opened by exploratory wells in 1945, while new pays in proven areas rose to 29 in 1946 from the 15 discovered in 1945.

Total footage drilled by the 2830 exploratory tests in 1946 was 19,712,852 feet, an average of 4081 feet per test. Although the total footage drilled in 1946 exceeded the 19,500,046 feet drilled by the 4510 exploratory tests in 1945, the average depth per test failed to reach the all-time record of 4324 feet attained in 1945.

Texas, Then Illinois

Texas continued to maintain its lead in exploratory completions with 343 finding new sources of oil, gas and distillate, including new fields, pays and extensions to proven fields, out of a total of 1746 drilled. There were 118 new oil fields found, with North Texas accounting for 34, West Central Texas 25, West Texas 19 and the Lower Texas Coast 10. New pays were uncovered by 102 wells while 26 extensions were completed in proven areas. New distillate fields number 20 while 18 tests opened new gas fields.

Illinois was second in the number of exploratory completions with 113 successful wells out of 656 such tests drilled. Discoveries included 30 new oil fields and one gas field.

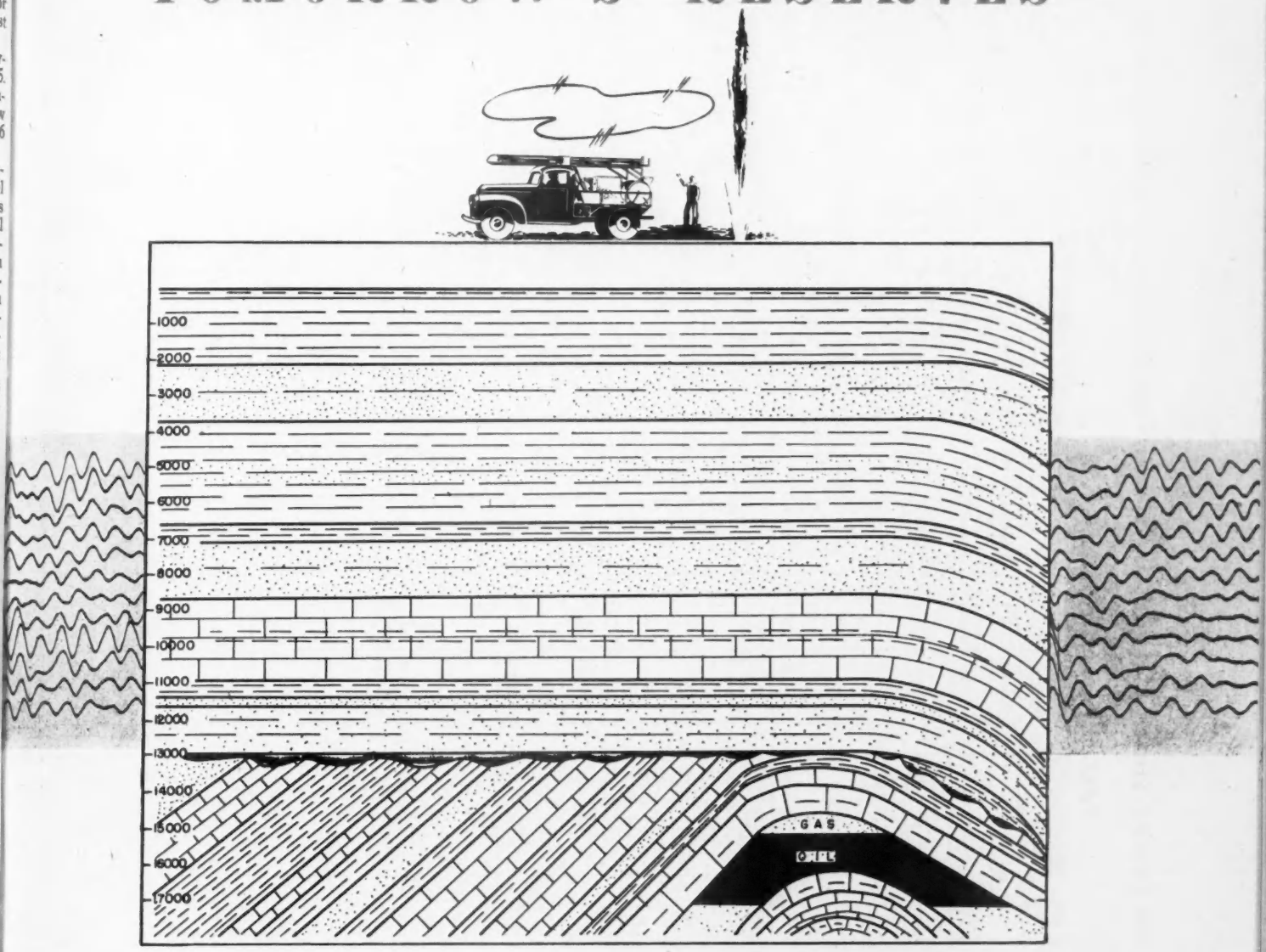
Oklahoma maintained its good ratio of exploratory completions with 105 successful wells completed out of 519 drilled. The productive wells included 51 new oil fields, 21 gas fields and one distillate field. Louisiana has 82 productive completions out of 294 drilled while Kansas recorded 81 successful completions out of 350 drilled.

Details of exploratory drilling results by states in 1946 appear on pages 132 and 135.

Salient data on individual productive exploratory wells completed in 1946 begin on page 200.

Shooting WELL AHEAD OF TODAY'S PRODUCTION TO LOCATE

TOMORROW'S RESERVES



WITH EQUIPMENT

ESPECIALLY DESIGNED

FOR DEEPER EXPLORATION

With advanced-design equipment especially constructed for deeper exploration, experienced General Crews are now compiling accurate data on prospective producing formations as deep as there are reflecting horizons . . . to the deepest sedimentary beds.

For many operators, this accurate data on deeper producing horizons . . . thoroughly compiled and correctly interpreted . . . will lead the way to tomorrow's deeper drilling frontiers.

For more than a decade, dependable General Crews have been accurately determining and locating conditions favorable to finding new oil. Accuracy and correct interpretation have been characteristic of all General operations.

Today, General Crews are charting the way well ahead of present deep production. Crews are available for domestic and foreign work. Let them help you locate tomorrow's reserves. General is better equipped than ever to serve.

General

GEOPHYSICAL COMPANY HOUSTON

Results of Exploratory Drilling in the United States in 1946, by States, and Comparison with Earlier Years

PART 1: Productive Tests

State or District	OIL									DISTILLATE									GAS									TOTAL PRODUCTIVE		
	New Fields			New Pays			Extensions			New Fields			New Pays			Extensions			New Fields			New Pays			Extensions					
	No.	Footage	Avg. Depth	No.	Footage	Avg. Depth	No.	Footage	Avg. Depth	No.	Footage	Avg. Depth	No.	Footage	Avg. Depth	No.	Footage	Avg. Depth	No.	Footage	Avg. Depth	No.	Footage	Avg. Depth	No.	Footage	Avg. Depth	No.	Footage	Avg. Depth
Alabama	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....
Arizona	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....
Arkansas	5	21,316	4263	6	33,305	5551	2	16,711	8356	1	7,418	7418	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	14	78,750	5625
California	11	75,485	6862	3	14,862	4954	7	47,330	6761	..	.....	....	..	.....	....	..	.....	....	4	20,723	5181	..	.....	....	4	13,766	3442	29	172,166	5937
Colorado	1	6,231	6231	1	6,121	6121	4	25,981	6495	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	6	38,333	6389
Florida	..	.....	....	..	.....	....	1	11,578	11578	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	1	11,578	11578
Georgia	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....
Illinois	30	78,371	2612	29	84,805	2924	51	145,702	2857	..	.....	....	..	.....	....	..	.....	....	1	265	265	1	1,543	1543	1	753	753	113	311,439	2756
Indiana	6	13,583	2264	3	5,349	1783	5	8,796	1759	..	.....	....	..	.....	....	..	.....	....	1	1,084	1084	..	.....	....	..	.....	....	15	28,812	1921
Kansas	36	130,462	3624	6	22,625	3771	19	60,900	3205	..	.....	....	..	.....	....	..	.....	....	5	16,992	3398	..	.....	....	15	43,041	2869	81	274,020	3383
Kentucky	7	11,178	1597	4	8,384	2096	6	10,350	1725	..	.....	....	..	.....	....	..	.....	....	2	2,250	1125	..	.....	....	..	.....	....	19	32,162	1693
Louisiana	14	145,162	10369	33	321,988	9757	6	24,736	4123	5	51,214	10243	16	171,733	10733	2	18,472	9236	1	10,130	10130	4	42,761	10690	1	2,823	2823	82	789,019	9622
North Louisiana	3	25,644	8548	..	.....	....	6	24,736	4123	2	16,370	8185	2	16,973	8487	1	8,432	8432	..	.....	....	1	10,287	10287	1	2,823	2823	16	105,265	6579
South Louisiana	11	119,518	10865	33	321,988	9757	..	.....	....	3	34,844	11615	14	154,760	11054	1	10,040	10040	1	10,130	10130	3	32,474	10825	..	.....	....	66	683,754	1030
Maryland	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....
Michigan	13	31,194	2399	..	.....	....	4	14,315	3579	1	5,037	5037	..	.....	....	..	.....	....	5	8,747	1749	3	6,393	2131	1	1,464	1464	27	67,150	2487
Mississippi	2	16,357	8179	..	.....	....	4	36,675	9169	..	.....	....	1	10,497	10497	..	.....	....	1	2,546	2546	2	23,818	11909	1	9,352	9352	11	99,245	9022
Missouri	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....
Montana	3	7,426	2475	2	4,842	2421	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	2	6,605	3303	..	.....	....	7	18,873	2696
Nebraska	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....
New Mexico	2	8,678	4339	2	13,250	6625	1	7,044	7044	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	1	3,825	3825	6	32,797	5466
New York	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....
North Carolina	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....
Ohio	1	3,336	3336	..	.....	....	2	8,421	4210	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	25	89,157	3566	28	100,914	3604
Oklahoma	51	209,615	4110	9	44,412	4935	18	94,865	5270	1	6,665	6665	1	6,510	6510	1	10,984	10984	21	72,799	3467	..	.....	....	3	7,434	2478	105	453,284	4317
Oregon	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....
Pennsylvania	4	9,421	2355	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	8	20,827	2603	..	.....	....	..	.....	....	12	30,248	2521
South Dakota	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....
Tennessee	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....
Texas	118	571,673	4845	102	647,493	6348	26	171,933	6613	20	181,212	9061	24	222,685	9279	4	33,655	8414	18	86,977	4832	16	79,558	4972	15	91,262	6084	343	2,086,448	6083
E. Texas, Border	2	17,363	8682	2	9,153	4577	..	.....	....	..	.....	....	..	.....	....	1	5,944	5944	1	10,986	10986	..	.....	....	4	28,378	7095	10	71,824	7182
Rest of E. Texas	7	43,698	6243	4	28,060	7015	2	17,296	8648	2	15,020	7510	..	.....	....	..	.....	....	..	.....	....	..	.....	....	1	4,240	4240	16	108,314	6770
North Texas	34	130,145	3828	19	84,168	4430	3	12,930	4310	..	.....	....	..	.....	....	..	.....	....	2	11,870	5935	1	1,286	1286	..	.....	....	59	240,399	4075
West Central Texas	25	80,540	3222	12	37,543	3129	..	.....	....	..	.....	....	..	.....	....	..	.....	....	3	9,203	3068	..	.....	....	..	.....	....	40	127,286	3182
West Texas	19	132,581	6978	14	124,547	8896	12	69,482	5790	..	.....	....	..	.....	....	..	.....	....	4	16,135	4034	1	2,950	2950	..	.....	....	50	345,695	6914
Texas Panhandle	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....
Gulf Coast, Upper	7	66,905	9558	26	188,479	7249	5	50,831	10166	4	46,536	11634	16	157,669	9854	1	11,653	11653	1	7,200	7200	4	28,659	7165	2	18,490	9245	66	576,422	8734
Gulf Coast, Lower	10	58,427	5843	20	147,866	7393	1	7,320	7320	14	119,656	8547	7	58,636	8377	2	16,058	8029	3	17,592	5864	5	28,977	5795	5	32,404	6481	67	486,936	7268
Southwest Texas	7	19,686	2812	5	27,677	5535	3	14,074	4682	..	.....	....	1	6,380	6380	..	.....	....	4	13,991	3498	4	13,351	3338	3	7,750	2583	27	102,909	3811
South Central Texas	7	22,328	3190	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	1	4,335	4335	..	.....	....	8	26,663	3333
Utah	1	1,215	1215	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	1	1,215	1215
Virginia	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....
Washington	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....	..	.....	....
West Virginia	..	.....	....	2	4,688	2344	1	2,038	2038	..	.....	....	..	.....	....	..	.....	....	6	23,162	3860	..	.....	....	13	57,300	4408	22	87,188	3963
Wyoming	3	19,084	6361	3	15,181	5060	3	20,210	6737	1	12,895	12895	..	.....	....	..	.....	....	1	3,831	3831	1	5,910	5910	1	8,108	8108	13	85,219	6555
U. S. Total, 1946	308	1,359,757	4415	205	1,227,305	5987	160	707,585	4422	29	264,441	9119	42	411,425	9796	7	63,111	9016	74	270,333	3653	29	166,588	5744	81	328,285	4053	935	4,798,860	5132
U. S. Total, Earlier Years																														
1945	317	1,503,763	4774	158	894,688	5663	154	702,822	4564	30	269,915	8997	14	140,464	10033	6	54,162	9027	113	486,529	4306	15	67,455	4497	70	216,103	3087	877	4,335,901	4944
1944	326	1,422,250	4363	149	731,764	4911	135	656,987	4889	32	250,228	7820	9	75,436	8382	10	79,797	7980	102	417,944	4097	15	95,099	6340	27	111,174	4118	805	3,843,679	4775
1943	276	1,232,396	4465	127	562,454	4452	132	559,090	4236	15	140,564	9371	9	88,031	9781	3	25,589	8530	56	212,814	3800	16	90,372	5648	10	58,996	5900	644	2,973,306	4617
1942	288	1,105,043	3837	163	810,726	4974	..	.....	....	13	103,960	7997	2	12,383	6191	..	.....	....	47	134,880	2870	10	41,102	410	..	.....	....	523	2,208,094	4222
1941	301	1,165,966	3874	261	1,338,648	5117	..	.....	....	3	23,505	7835	2	7,109	3555	..	.....	....	58	177,974	3069	25	89,263	3571	..	.....	....	650	2,799,465	4307
1940	261	957,167	3667	167	914,442	5476	..	.....	....	2	12,792	6396	..	.....	....	..	.....	....	46	122,439	2662	16	55,983	3499	..	.....	....	492	2,062,823	3237
1939	224	782,289	3492	190	998,595	5256	..	.....	....	1	7,999	7999	3	24,709	8236	..	.....	....	33	103,450	3135	22	92,626	4210	..	.....	....	473	2,009,668	4249
1938	229	944,455	4124	144	818,186	5661	7	25,027	3575	4	23,657	5914	4	27,115	6779	..	.....	....	31	102,440	3305	11	49,634	4512	3	12,042	4014	433	1,999,556	4618
1937	203	831,123	4094	119	615,007	5168	3	9,036	3012	3	19,377	6459	3	24,574	8191	..	.....	....	33	77,389	2345	15	51,145	3410	..	.....	....	379	1,627,651	4295

CONTINUED ON PAGE 135

CONTINUED ON PAGE 135

CONTINUED FROM PAGE 132

PART 2: Unproductive Tests and Total Exploratory Tests

STATE OR DISTRICT	DRY WILDCATS			DRY NEW PAY TESTS			DRY OUTPOSTS			TOTAL DRY			TOTAL EXPLORATORY TESTS		
	No.	Footage	Average Depth	No.	Footage	Average Depth	No.	Footage	Average Depth	No.	Footage	Average Depth	No.	Footage	Average Depth
Alabama	13	54,549	4196	....	.....	....	....	.....	....	13	54,549	4196	13	54,549	4196
Arizona	2	6,259	3129	....	.....	....	....	.....	....	2	6,259	3129	2	6,259	3129
Arkansas	55	196,531	3573	....	.....	....	1	8,368	8368	56	204,899	3659	70	283,649	4052
California	254	1,144,248	4505	....	.....	....	....	.....	....	254	1,144,248	4505	283	1,316,414	4652
Colorado	13	64,832	4987	2	14,346	7173	1	6,870	6870	16	86,048	5378	22	124,381	5654
Florida	24	149,938	6247	....	.....	....	....	.....	....	24	149,938	6247	25	161,516	6461
Georgia	2	8,441	4220	....	.....	....	....	.....	....	2	8,441	4220	2	8,441	4220
Illinois	543	1,336,506	2461	....	.....	....	....	.....	....	543	1,336,506	2461	656	1,647,945	2512
Indiana	92	170,084	1849	....	.....	....	....	.....	....	92	170,084	1849	107	198,896	1859
Kansas	269	982,953	3654	....	.....	....	....	.....	....	269	982,953	3654	350	1,256,973	3591
Kentucky	84	162,407	1933	....	.....	....	....	.....	....	84	162,407	1933	103	194,569	1889
Louisiana	208	1,455,516	6998	1	12,846	12846	3	14,403	4801	212	1,482,765	6994	294	2,271,784	7727
North Louisiana	123	612,114	4977	1	12,846	12846	2	7,477	3739	126	632,437	5019	142	737,702	5195
South Louisiana	85	843,402	9922	....	.....	....	1	6,926	6926	86	850,328	9888	152	1,534,082	10093
Maryland	1	7,710	7710	....	.....	....	....	.....	....	1	7,710	7710	1	7,710	7710
Michigan	227	550,225	2424	1	4,805	4805	2	3,667	1834	230	558,697	2429	257	625,847	2435
Mississippi	79	526,099	6659	....	.....	....	....	.....	....	79	526,099	6659	90	625,344	6948
Missouri	23	24,328	1058	....	.....	....	....	.....	....	23	24,328	1058	23	24,328	1058
Montana	19	71,174	3746	....	.....	....	3	9,092	3031	22	80,266	3648	29	99,139	3419
Nebraska	5	12,799	2560	....	.....	....	....	.....	....	5	12,799	2560	5	12,799	2560
New Mexico	48	169,900	3540	2	12,117	6059	....	.....	....	50	182,017	3640	56	214,814	3836
New York	1	5,685	5685	....	.....	....	....	.....	....	1	5,685	5685	1	5,685	5685
North Carolina	5	26,173	5235	....	.....	....	....	.....	....	5	26,173	5235	5	26,173	5235
Ohio	45	145,349	3230	....	.....	....	....	.....	....	45	145,349	3230	73	246,263	3373
Oklahoma	414	1,417,608	3424	....	.....	....	....	.....	....	414	1,417,608	3424	519	1,870,892	3605
Oregon	2	17,148	8574	....	.....	....	....	.....	....	2	17,148	8574	2	17,148	8574
Pennsylvania	2	12,969	6485	1	10,096	10096	1	4,742	4742	4	27,807	6952	16	58,055	3628
South Dakota	3	8,038	2679	....	.....	....	....	.....	....	3	8,038	2679	3	8,038	2679
Tennessee	2	1,618	809	....	.....	....	....	.....	....	2	1,618	809	2	1,618	809
Texas	1326	5,464,694	4121	29	210,457	7257	48	260,637	5430	1403	5,935,788	4231	1746	8,022,236	4595
East Texas Border	12	70,738	5895	....	.....	....	....	.....	....	12	70,738	5895	22	142,562	6480
Rest of Eastern Texas	81	400,703	4947	2	25,828	12914	....	.....	....	83	426,531	5139	99	534,845	5402
North Texas	366	1,008,376	2755	4	16,979	4245	4	21,048	5262	374	1,046,403	2798	433	1,286,802	2972
West Central Texas	179	504,205	2817	6	25,078	4180	2	6,154	3077	187	535,437	2863	227	662,723	2919
West Texas	137	670,861	4897	11	105,393	9581	20	108,548	5427	168	884,802	5267	218	1,230,497	5644
Texas Panhandle	12	56,645	4720	1	7,014	7014	....	.....	....	13	63,659	4897	13	63,659	4897
Gulf Coast, Upper	138	1,042,111	7552	1	11,447	11447	3	23,821	7940	142	1,077,379	7587	208	1,653,801	7951
Gulf Coast, Lower	155	973,415	6280	2	7,590	3795	13	76,479	5883	170	1,057,484	6220	237	1,544,420	6517
Southwest Texas	150	458,401	3056	....	3,930	3930	4	15,783	3946	155	478,114	3085	182	581,023	3192
South Central Texas	96	279,239	2909	1	7,198	7198	2	8,804	4402	99	295,241	2982	107	321,904	3008
Utah	4	13,114	3279	....	.....	....	....	.....	....	4	13,114	3279	5	14,329	2866
Virginia	2	5,370	2685	....	.....	....	....	.....	....	2	5,370	2685	2	5,370	2685
Washington	1	6,230	6230	....	.....	....	....	.....	....	1	6,230	6230	1	6,230	6230
West Virginia	9	34,085	3787	1	5,460	5460	1	5,297	5297	11	44,842	4077	33	132,030	4001
Wyoming	18	65,216	3623	1	4,465	4465	2	8,523	4264	21	78,209	3724	34	163,428	4807
U. S. Total, 1946	3795	14,317,796	3773	38	274,592	7226	62	321,604	5187	3895	14,913,992	3829	4830	19,712,852	4081
U. S. Total, Earlier Years															
1945	3486	14,504,642	4161	39	284,441	7293	108	375,062	3473	3633	15,164,145	4174	4510	19,500,046	4324
1944	3425	13,470,864	3933	22	141,039	6411	73	383,802	5258	3520	13,995,687	3976	4325	17,839,366	4125
1943	2951	10,702,429	3627	....	.....	....	36	164,155	4560	2987	10,866,584	3638	3631	13,839,890	3812
1942	2652	9,320,691	3515	....	.....	....	....	.....	....	2652	9,320,691	3515	3175	11,752,466	3702
1941	3047	9,651,013	3167	....	.....	....	....	.....	....	3047	9,651,013	3167	3697	12,450,478	3368
1940	2672	8,649,828	3237	....	.....	....	....	.....	....	2672	8,649,828	3207	3164	10,712,651	3386
1939	2488	7,764,816	3121	....	.....	....	....	.....	....	2488	7,764,816	3121	2961	9,774,484	3301
1938	2179	7,012,901	3218	....	.....	....	....	.....	....	2179	7,012,901	3218	2612	9,012,457	3450
1937	1943	7,173,550	3692	....	.....	....	....	.....	....	1943	7,173,550	3692	2322	8,801,201	3790

Wildcatting Success Below Average Ratio

Smaller Percent of Wildcats Completed In 1946 Were Productive Than Average During Preceding Ten Years

WILDCATTING figures for the United States during 1946 indicate the strenuous effort being made by the industry to find additional oil fields, and they also bear out statements that new production is becoming more difficult to discover. Compared with the national average for the 10-year period covering 1937-1946, a larger percent of the total wells completed in 1946 were of the wildcat classification and a smaller portion of the wildcats found oil, gas or distillate.

During 1946, tests of strict wildcat nature (exclusive of those seeking new pays in proven fields or outposts attempting to extend known producing pools) constituted 13.9 percent of all wells completed, whereas the national average for the 10-year period has been 11.4 percent. In other words, wildcats in 1946 comprised 2.7 percent more of the drilling than in the 1937-46 period. At the same time, only 9.8 percent of the wildcats drilled in 1946 were productive, in comparison with a success ratio of 10.8 percent for this decade.

The ratio of success among the different states in the number of wells drilled and the number of discoveries resulting varied widely. Eight states bettered the 1946 national average for productive wildcatting, mostly in the areas where active wildcatting is to be anticipated: Wyoming, Oklahoma, Montana, Kansas, and Texas.

States with discovery success less than the national average are California; Colorado, possibly because operators were concentrating on the development of Rangely field; Illinois and Michigan, both with poor luck in finding new fields despite more wildcat drilling than their average for 1937-46; Mississippi, where operators tried hard but not as hard as in the 10-year period; New Mexico, and Ohio.

The number of states that drilled a larger percentage of wildcat wells in 1946 than in the 1937-46 period far exceeds the number of states that had better success at finding production in the same period. Only Pennsylvania, Arkansas, California and Mississippi were in the latter classification. Among the leading states that registered a smaller percentage of successful wildcats in 1946 than in 1937-46 were Texas, Oklahoma, Louisiana, Kansas, Illinois, Indiana, Montana, Wyoming, and Colorado. Except in the cases of Colorado and Indiana all these states showed increased percentages of wildcats drilled in 1946 over the previous decade.

Ratio of Wildcatting to all Drilling and Proportion of Wildcats Discovering New Fields, By Districts, 1937-1946

STATE OR DISTRICT	TEN YEARS, 1937-1946						YEAR 1946					
		*STRICT WILDCATS						*STRICT WILDCATS				
		Total			Productive			Total			Productive	
	Total New Wells Drilled (All Classes)	Number	Percent of All Wells	Dry	Number	Percent of All Strict Wildcats	Total New Wells Drilled (All Classes)	Number	Percent of All Wells	Dry	Number	Percent of All Strict Wildcats
Alabama	151	110	72.8	107	3	2.7	17	13	76.5	13	.....	.....
Arizona	22	22	100.0	22	.....	.....	2	2	100.0	2	.....	.....
Arkansas	2,169	489	22.5	448	41	8.4	201	61	30.3	55	6	9.8
California	14,135	1,697	12.0	1,610	87	5.1	1,823	269	14.8	254	15	5.6
Colorado	449	77	17.1	71	6	7.8	176	14	8.0	13	1	7.1
Florida	71	66	93.0	65	1	1.5	27	24	88.9	24	.....	.....
Georgia	30	30	100.0	30	.....	.....	2	2	100.0	2	.....	.....
Illinois	24,460	4,304	17.6	4,012	292	6.8	2,342	574	24.5	543	31	5.4
Indiana	3,549	874	24.6	794	80	9.2	512	99	19.3	92	7	7.1
Iowa	17	17	100.0	17	.....	.....	.....	.....	.....	.....	.....	.....
Kansas	18,665	2,932	15.7	2,460	472	16.1	2,127	310	14.6	269	41	13.2
Kentucky	7,646	732	9.6	653	79	10.8	853	93	10.9	84	9	9.7
Louisiana	11,843	1,545	13.0	1,330	215	13.9	1,418	228	16.1	208	20	8.8
North Louisiana	5,517	822	14.9	758	64	7.8	807	128	15.9	123	5	3.9
South Louisiana	6,326	723	11.4	572	151	20.9	611	100	16.4	85	15	15.0
Maryland	2	2	100.0	2	.....	.....	1	1	100.0	1	.....	.....
Michigan	8,962	2,437	27.2	2,254	183	7.5	781	246	31.5	227	19	7.7
Mississippi	1,611	610	37.9	588	22	3.6	263	82	31.2	79	3	3.7
Missouri	719	150	20.9	146	4	2.7	34	23	67.6	23	.....	.....
Montana	2,381	150	6.3	123	27	18.0	258	22	8.5	19	3	13.6
Nebraska	277	158	57.0	155	3	1.9	5	5	100.0	5	.....	.....
New Mexico	4,950	511	10.3	451	60	11.7	442	50	11.3	48	2	4.0
New York	10,447	12	0.1	12	.....	.....	1,152	1	0.1	1	.....	.....
North Carolina	6	6	100.0	6	.....	.....	5	5	100.0	5	.....	.....
North Dakota	9	2	22.2	2	.....	.....	.....	.....	.....	.....	.....	.....
Ohio	11,517	244	2.1	207	37	15.2	1,313	46	3.5	45	1	2.2
Oklahoma	21,205	2,629	12.4	2,167	462	17.6	3,179	487	15.3	414	73	15.0
Oregon	3	3	100.0	3	.....	.....	2	2	100.0	2	.....	.....
Pennsylvania	38,231	26	0.1	9	17	65.4	4,103	14	0.3	2	12	85.7
South Carolina	4	4	100.0	4	.....	.....	.....	.....	.....	.....	.....	.....
South Dakota	11	11	100.0	11	.....	.....	3	3	100.0	3	.....	.....
Tennessee	279	98	35.1	92	6	6.1	2	2	100.0	2	.....	.....
Texas	87,613	11,938	13.6	10,630	1,308	11.0	8,226	1,482	18.0	1,326	156	10.5
East Texas Border	437	65	14.9	52	13	20.0	194	15	7.7	12	3	20.0
Rest of East Texas	9,898	1,021	10.3	966	55	5.4	520	90	17.3	81	9	10.0
North Texas	18,349	2,461	13.4	2,128	333	13.5	2,261	402	17.8	366	36	9.0
West Central Texas	4,872	1,303	26.7	1,146	157	12.0	647	207	32.0	179	28	13.5
West Texas	18,806	1,348	7.2	1,180	168	12.5	1,825	160	8.8	137	23	14.4
Texas Panhandle	4,977	72	1.4	67	5	6.9	340	12	3.5	12	.....	.....
Gulf Coast, Upper	9,053	1,259	13.9	1,105	154	12.2	680	150	22.1	138	12	8.0
Gulf Coast, Lower	11,088	1,729	15.6	1,477	252	14.6	1,133	182	16.1	155	27	14.8
Southwest Texas	7,564	1,654	21.9	1,531	123	7.4	443	161	36.3	150	11	6.8
South Central Texas	2,569	1,026	39.9	978	48	4.7	183	103	56.3	96	7	6.8
Utah	29	13	44.8	13	.....	.....	5	5	100.0	4	1	20.0
Virginia	4	4	100.0	3	1	25.0	2	2	100.0	2	.....	.....
Washington	5	5	100.0	5	.....	.....	1	1	100.0	1	.....	.....
West Virginia	7,968	29	0.4	17	12	41.4	781	15	1.9	9	6	40.0
Wyoming	1,398	160	11.4	119	41	25.6	163	23	14.1	18	5	21.7
Total United States	280,838	32,097	11.4	28,638	3,459	10.8	30,221	4,206	13.9	3,795	411	9.8

* Exclusive of all tests seeking new pay zones or outposts attempting to extend known fields.

U. S. Crude Reserves Reach All-Time Peak

ESTIMATED proved petroleum reserves in the U. S. were increased again as usual in 1946 and stood at a new all-time high of 21,287,673,000 barrels as of January 1, 1947, according to data compiled by THE OIL WEEKLY.

Although production in 1946 was the greatest ever recorded, it was more than compensated by the proving up of new reserves. The net increase in reserves for 1946 was 460,860,000 barrels, since the total at the beginning of the year had been 20,826,813,000 barrels, as estimated by the American Petroleum Institute.

This indicated net increase in reserves for 1946 was low in comparison with the large additions made annually in the late 1930's, when discoveries were far exceeding production. But the 1946 increase was close to the average for the seven years, 1940-1946. Furthermore, it represented a 2.2 percent increase in reserves, whereas the total demand for all oils in 1946 was about 1 percent less than in 1945.

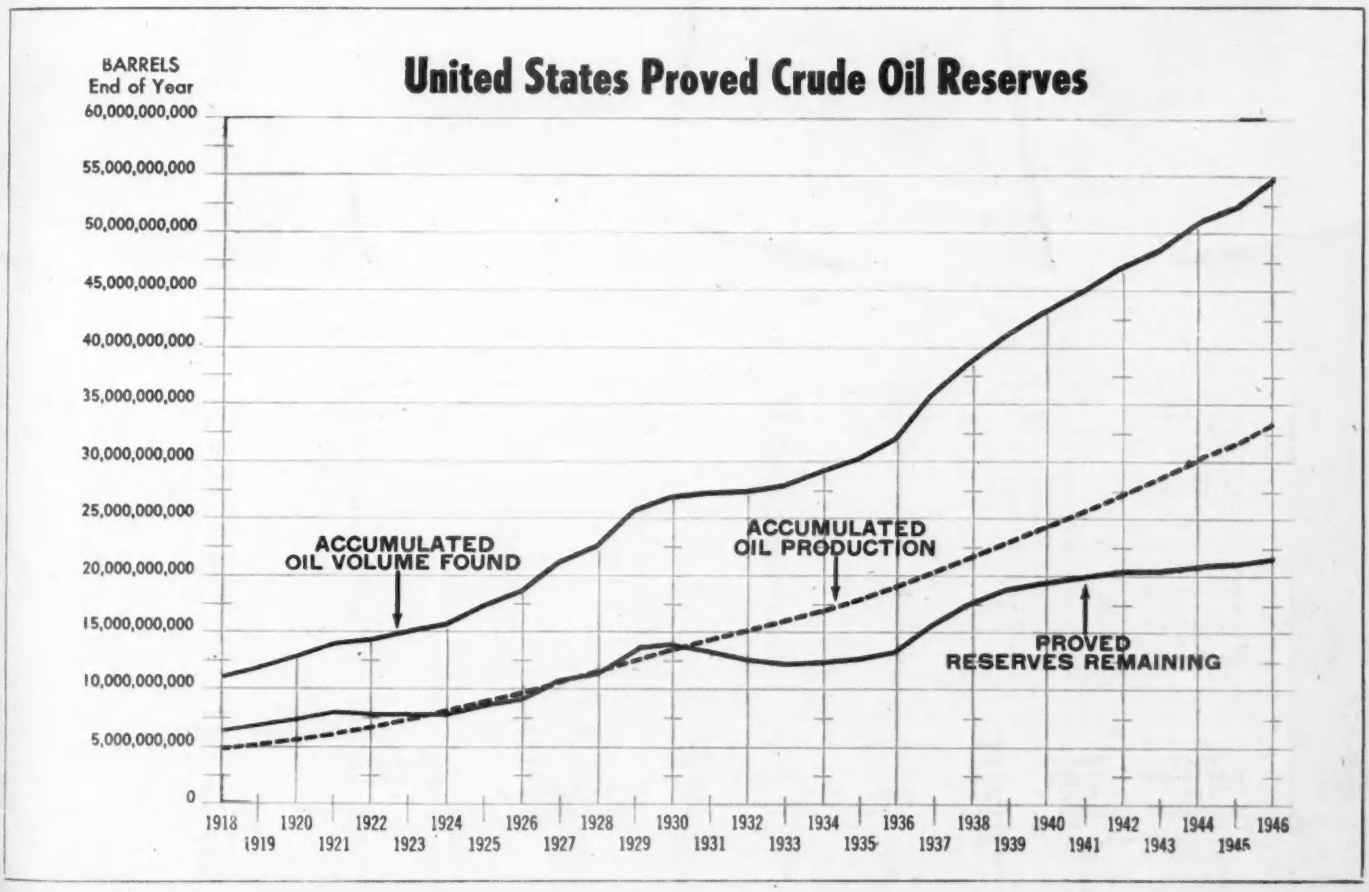
In arriving at the figure of 21,287,673,000 barrels for proved recoverable petroleum reserves in the U. S. at the end of 1946, it was estimated that 2,192,749,000 barrels of new reserves were proved up during 1946, as against the 1,731,889,000 barrels produced during the year. This estimate of new reserves proved during 1946 took into consideration the recoverable oil indicated so far in the new fields and new pay zones discovered during the year and the new oil proved up during the year by the continued development and expansion of previously discovered reservoirs.

Gain Over 1945

The 1946 record of proving up 2,192,749,000 barrels of new reserves was materially short of the provings of 1937 and 1938, which were above 3 billion barrels annually. But 1946 showed a gain of about 100 million barrels over 1945 and was the best year since 1939, when 2,399,122,000 barrels were proved, and it compared with an average of slightly under 2 billion barrels per year proved for the eight years, 1939-1946.

While the estimated proved U. S. reserves of 21,287,673,000 barrels at the end of 1946 represented a new all-time record, the reserves position of the industry must be described as relatively tight. In relation to annual demand for petroleum, reserves are at present no less ample than for several years past but they are less ample than they were for five or six years in the late 1930's and the early 1940's. For the past three years reserves have been maintained at levels about 12 times annual production of crude, while in the years 1938-1942 the reserves were from 14 to 14.5 times as great as annual production. The following table shows proved reserves at the end of each year back to 1936 and the relation of reserves to annual production for each of the years.

YEAR	Barrels Proved Reserves at End of Year	Reserves/Annual Production Ratio
1936.....	13,063,400,000	11.9:1
1937.....	15,507,268,000	12.1:1
1938.....	17,348,146,000	14.3:1
1939.....	18,483,012,000	14.6:1
1940.....	19,024,515,000	14.1:1
1941.....	19,589,296,000	14.0:1
1942.....	20,082,793,000	14.5:1
1943.....	20,064,152,000	13.3:1
1944.....	20,453,231,000	12.2:1
1945.....	20,826,813,000	12.2:1
1946.....	**21,287,673,000**	**12.3:1**



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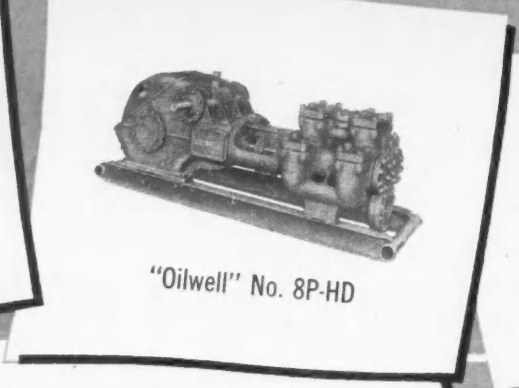

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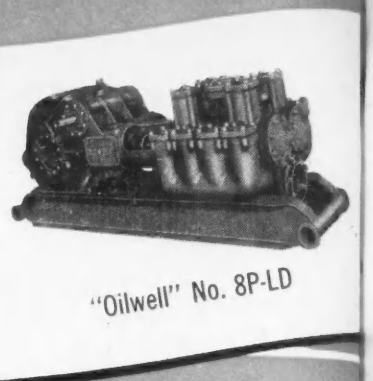

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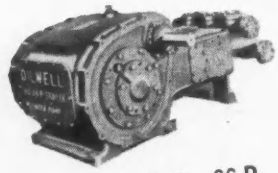

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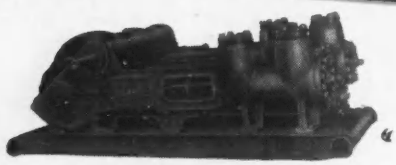

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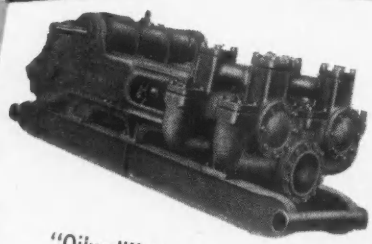

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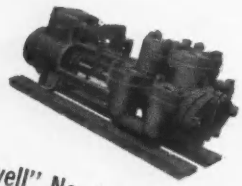

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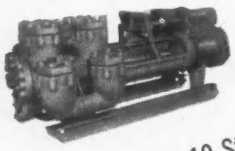

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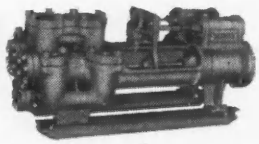


"Oilwell" No. 20 Steam

BRIEF SPECIFICATIONS—Power Pumps

Pump (Type Number)	Maximum Fluid Liner (or Plunger) Size and Stroke Inches	Suction Size Inches	Rated R.P.M.	Recommended B.H.P. at Rated R.P.M.	Maximum Working Pressure with Full Size Liners (or Plungers) P.S.I.	Theoretical Displacement (Piston Rods Deducted) U.S. Gallons per Revolution	Rated Fluid Chamber Pressures P.S.I.	
							Suction	Discharge
No. 36-P	3 x 6	3	140	75	1,420	.551	1,600	3,200
No. 6-P	4 x 6	3	100	32	365	1.26	400	800
No. 6P-LD	5½ x 6	6	100	32	190	2.42	200	400
No. 8P-HD	5 x 8	6	80	85	600	2.58	900	1,800
No. 8P-LD	7½ x 8	8	80	85	250	5.98	250	500
No. 12-P	5 x 12	6	70	100	540	3.86	600	1,200
No. 12P-LD	6 x 12	6	70	100	365	5.66	600	1,200
No. 412-P	4 x 12	4	70	140	1,250	2.32	3,500	5,000
No. 612-P	6 x 12	6	70	140	520	5.60	900	1,800
No. 612P-LD	8 x 12	10	70	140	285	10.15	250	500
No. 712-P	7 x 12	8	70	220	600	7.70	1,000	2,000
No. 14P-HD	7¼ x 14	10	65	325	765	9.51	1,500	2,500
No. 18-P	7¼ x 18	10	60	385	765	12.24	2,000	3,000
No. 20-P	7¾ x 20	10	55	480	825	15.45	2,000	3,000

BRIEF SPECIFICATIONS—Steam Pumps

Pump (Type Number or Designation)	Steam Cylinder Bore Inches	Max. Fluid Liner Size Inches	Stroke Inches	Suction Size Inches	Rated Steam Pressure lbs. P.S.I.	Theoretical Displacement (Piston Rods Deducted) U.S. Gallons per Revolution	RATED WORKING PRESSURE			
							Semi-Steel Fluid Chamber		Cast-Steel Fluid Chamber	
							Suction	Discharge	Suction	Discharge
No. 20	16¼	7¾	20	10	350	15.46	.....	.....	2,000	3,000
No. 220	18	8	20	10	400	16.38	.....	.....	3,000	4,000
No. 320	18	7	20	12	400	18.45	.....	.....	3,000	4,000
6x4x6-B	6	4	6	3	350	1.26	400	800	.....	.....
10x4x10	10	4	10	4	350	2.02	.....	.....	3,500	5,000
10x5x10	10	5	10	4	350	3.25	500	1,000	.....	.....

Annual Additions to U. S. Petroleum Reserves and Net Increases After Deducting Current Production, 1937-1946

Source: American Petroleum Institute, except latest year which is estimated by THE OIL WEEKLY

(BARRELS)

YEAR	*New Reserves Proved During Year	Production During Year	Net Increase (or Decrease) in Reserves During Year
1937	3,721,532,000	1,277,644,000	+2,443,868,000
1938	3,054,064,000	1,213,186,000	+1,840,878,000
1939	2,399,122,000	1,264,256,000	+1,134,866,000
1940	1,893,350,000	1,351,847,000	+ 541,503,000
1941	1,968,963,000	1,404,182,000	+ 564,781,000
1942	1,878,976,000	1,385,479,000	+ 493,497,000
1943	1,484,786,000	1,503,427,000	— 18,641,000
1944	2,067,500,000	1,678,421,000	+ 389,079,000
1945	†2,084,685,000	1,711,103,000	+ 373,582,000
1946	2,192,749,000	1,731,889,000	+ 460,860,000

* In both new and older reservoirs and reflecting upward or downward revisions of earlier estimates based on additional information.

† Adjusted for revision of year's production to Bureau of Mines figure.

Estimated Proved Petroleum Reserves in the United States

Changes in 1946 estimated by The Oil Weekly; reserves at beginning of year from A.P.I.; production in 1946 includes Bureau of Mines data for 10 months and A.P.I. for November and December.

(BARRELS)

STATE OR DISTRICT	*Proved Reserves January 1, 1946	‡New Reserves Proved in 1946	Production in 1946	Proved Reserves January 1, 1947	Net Change in Reserves in 1946
Alabama	785,000	2,500,000	387,000	**2,898,000**	+ 2,113,000
Arkansas	303,674,000	35,192,000	28,036,000	**310,830,000**	+ 7,156,000
California	3,409,948,000	273,000,000	315,105,000	**3,367,843,000**	— 42,105,000
Colorado	259,830,000	102,500,000	12,008,000	**350,322,000**	+ 90,492,000
Florida	†195,000	850,000	54,000	**991,000**	+ 796,000
Illinois	349,620,000	112,908,000	75,547,000	**386,981,000**	+ 37,361,000
Indiana	41,243,000	27,500,000	6,812,000	**61,931,000**	+ 20,688,000
Kansas	541,846,000	50,850,000	97,204,000	**495,492,000**	— 46,354,000
Kentucky	56,721,000	19,675,000	10,775,000	**65,621,000**	+ 8,900,000
Louisiana	1,689,781,000	283,754,000	142,618,000	**1,830,917,000**	+141,136,000
North Louisiana	†346,745,000	143,561,000	30,707,000	**459,599,000**	+112,854,000
South Louisiana	†1,343,036,000	140,193,000	111,911,000	**1,371,318,000**	+ 28,282,000
Michigan	64,186,000	13,328,000	17,105,000	**60,409,000**	— 3,777,000
Mississippi	267,160,000	60,850,000	24,143,000	**303,867,000**	+ 36,707,000
Missouri	†80,000	25,000	51,000	**54,000**	— 26,000
Montana	108,474,000	9,077,000	8,877,000	**108,674,000**	+ 200,000
Nebraska	500,000	226,000	276,000	**450,000**	— 50,000
New Mexico	512,373,000	59,752,000	36,784,000	**535,341,000**	+ 22,968,000
New York	81,189,000	.....	4,899,000	**76,290,000**	— 4,899,000
Ohio	29,681,000	1,460,000	2,938,000	**28,203,000**	— 1,478,000
Oklahoma	889,839,000	75,516,000	135,122,000	**830,233,000**	— 59,606,000
Pennsylvania	110,601,000	15,000,000	13,067,000	**112,534,000**	+ 1,933,000
Tennessee	†22,000	5,000	11,000	**16,000**	— 6,000
Texas	11,470,294,000	1,005,300,000	758,858,000	**11,716,736,000**	+246,442,000
East Texas	†3,625,142,000	152,500,000	172,460,000	**3,605,182,000**	— 19,960,000
North Texas	†487,377,000	60,188,000	58,024,000	**489,541,000**	+ 2,164,000
West Texas	†2,757,476,000	346,342,000	190,536,000	**2,913,282,000**	+155,806,000
Panhandle	†389,764,000	.....	30,309,000	**359,455,000**	— 30,309,000
Gulf Coast	†2,599,110,000	190,558,000	174,628,000	**2,615,040,000**	+ 15,930,000
South Texas	†1,611,425,000	255,712,000	132,901,000	**1,734,236,000**	+122,811,000
Virginia	†10,000	.....	3,000	**7,000**	— 3,000
West Virginia	38,630,000	909,000	2,947,000	**36,592,000**	— 2,038,000
Wyoming	600,131,000	42,572,000	38,262,000	**604,441,000**	+ 4,310,000
Total United States	20,826,813,000	2,192,749,000	1,731,889,000	**21,287,673,000**	+460,860,000

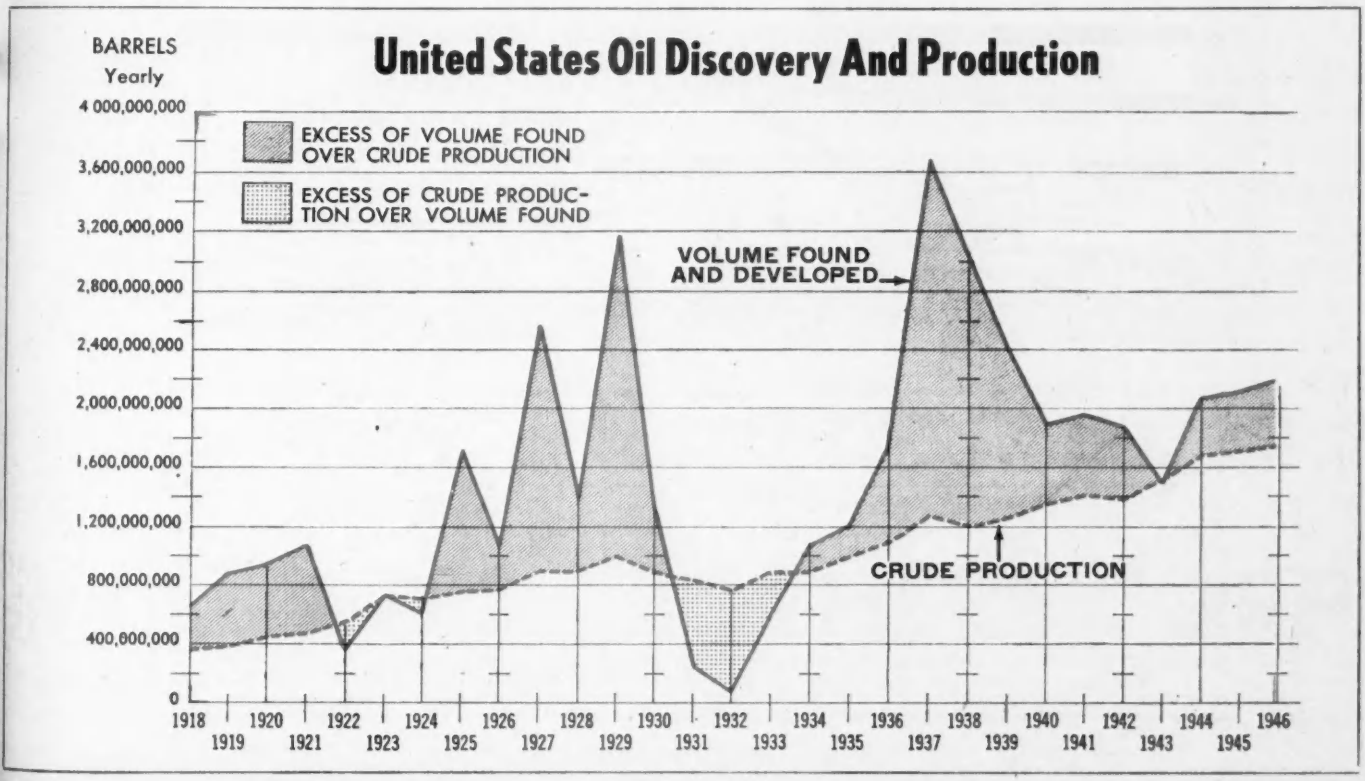
* From American Petroleum Institute, except as noted. † Estimated by The Oil Weekly.

‡ In both new and older reservoirs and reflecting upward or downward revision of earlier estimates based on more information.

While reserves have been maintained in recent years at levels about 12 times annual production, experience has indicated that the reserves have been close to minimum requirements to supply needed production without waste. Viewed from this angle, a less tight reserves position would be desirable. The prewar ratio of reserves about 14 to 14.5 times annual production would be nearer normal and perhaps satisfactory. But the regaining of that position would require material stepping up of annual provings of new reserves above the rates of recent years. And such increase of provings would have to be achieved in the face of the fact that exploratory drilling has been exceptionally heavy in each of the past several years. Consequently, a very intensive exploratory effort appears necessary for the next several years, along with fairly full and prompt development of new fields as they are found.

The 1946 record of proving up an estimated 2,192,749,000 barrels of new reserves, or about 100 million more than in 1945, was achieved with the benefit of increases in both field development and exploratory drilling. Total completions of 30,840 wells in 1946 were close to prewar normal and were 13.6 percent above the 27,140 of 1945. Completions of new oil wells totaled 15,962 in 1946, an increase of 14.5 percent over the 13,944 of 1945. Total exploratory completions set a new all-time record of 4830, an increase of 7.1 percent over the 4510 of 1945.

Judging by the results of 1946 and the prospect for some increase in drilling this year, it may be hoped that new reserves will be proved up in fairly satisfactory volume in 1947.



Pipe Line Building Gains

4285 Miles of New Lines Placed In Operation During 1946 As Compared With 211 Miles Constructed In Previous Year

By JAMES S. CRITZ, Staff Writer

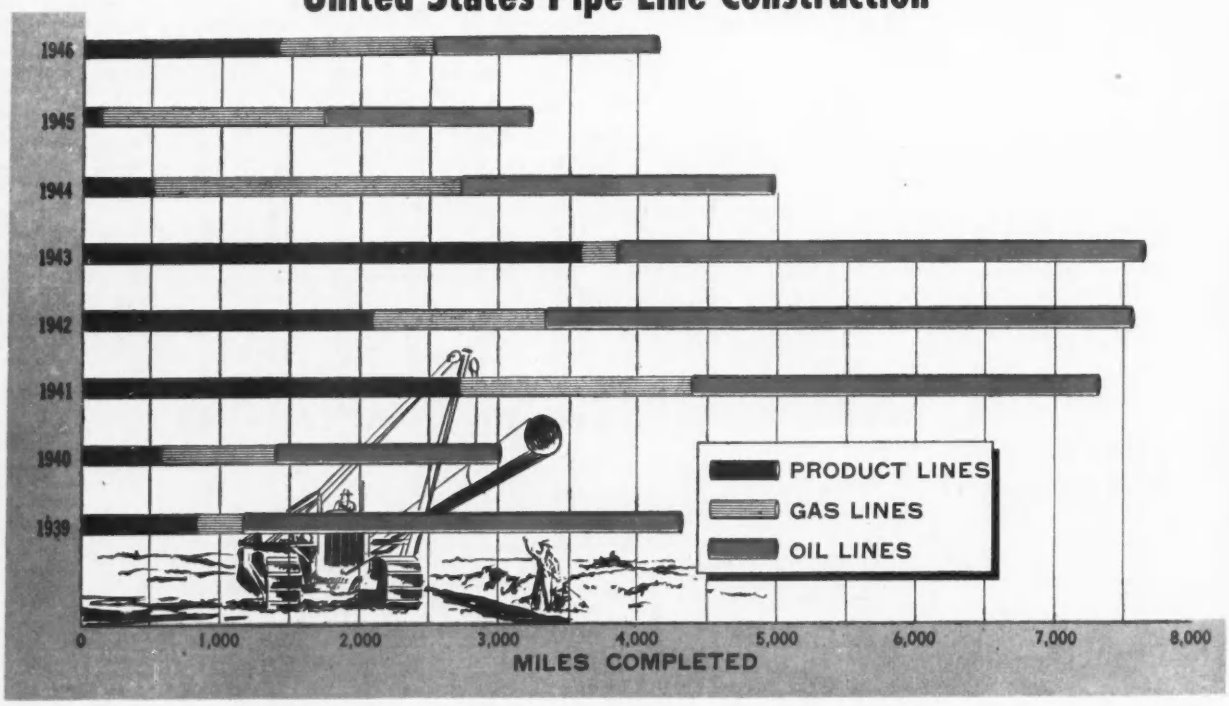
PIPE LINE construction in the United States during 1946 increased nearly 1000 miles or in excesss of one-fourth more than in 1945, and 1947 has the earmarks of becoming the greatest pipe line construction year in history.

A total of 4285 miles of new pipe lines was placed in operation during the year, despite the delay during the first of the year caused by steel and coal strikes. This compared with 3211 miles in 1945, 4961 miles in 1944 and 7671 miles in 1943, peak year of pipe line construction because of government-sponsored projects. Construction in 1946 was divided as follows: 1271 miles of gas lines completed, 1404 miles of products lines completed and 1610 miles of crude lines completed.

Pipe line construction in 1947 is starting off at an unusually high rate. At the beginning of 1947 a total of 9508 miles of pipe line had been authorized, 6442 miles of this figure actually being under construction with work on the remainder expected to get under way during the year. Some of the projects will not be completed during 1947. But with additional lines to be announced later, a conservative forecast for 1947 is 8000 miles of new pipe lines.

Three factors will account for this huge construction program: 1) Postwar expansion of natural gas pipe lines leading from the huge gas reservoirs of the southwest to the industrial areas of the Great Lakes, the Eastern Seaboard, and one large project to the Pacific Coast near Los Angeles; 2) A network of products pipe lines to inland cities, designed to cut down mounting railway transportation costs, and 3) crude lines designed to move mounting crude production of the Permian Basin sector of West Texas and New Mexico to the refining centers.

More than half the pipe line mileage



YEAR	MILES OF NEW PIPE LINE PLACED IN OPERATION[1]				MILES OF LINE BUILDING OR AUTHORIZED AT YEAR END[2]			
	Oil	Product	Gas	Total	Oil	Product	Gas	Total
1946	1610	1404	1271	4285	2099	2638	4771	9508
1945	1470	143	1598	3211	831	882	248	1961
1944	2219	518	2224	4961	112	....	286	398
1943	3795	3614	262	7671	848	....	1423	2371
1942	4200	2100	1250	7550	1147	428	140	1715
1941	2900	2700	1700	7300	322	....	446	768
1940	1615	575	810	3000	457	450	243	1150
1939	3155	840	305	4300	460	589	171	1220

[1] These figures represent total length of new systems actually placed in operation during the year. [2] Mileage on all types of pipe line systems on which construction was still under way at end of year, plus mileage of new lines authorized. Natural gas lines include system authorized by Federal Power Commission, but not applications on which Federal Power Commission has not yet acted.

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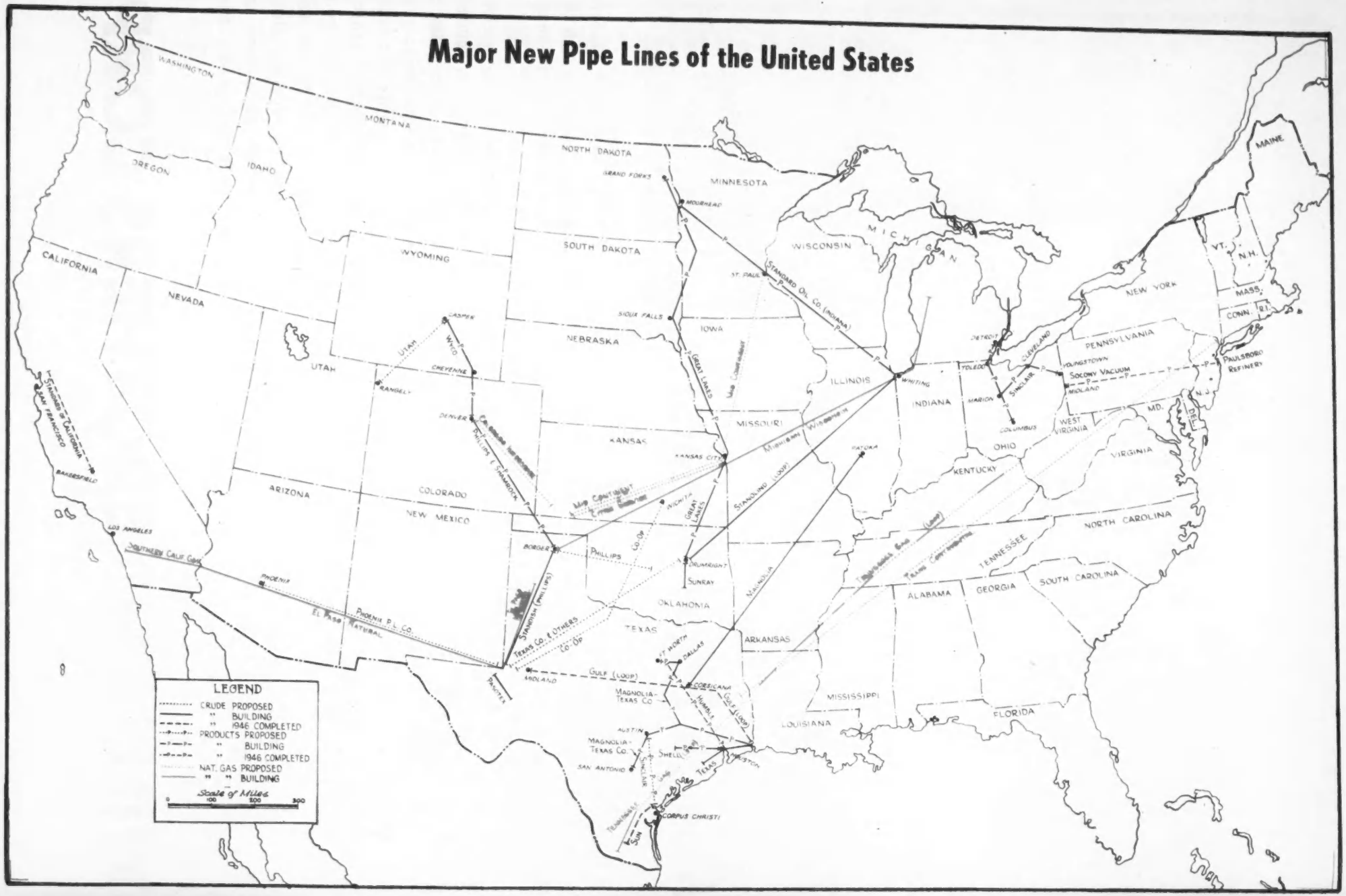
Major New Pipe Lines of the United States



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under construction or authorized at the end of 1946 was for natural gas. These lines will nearly double the amount of gas moved from the southwest to the rich industrial markets of Eastern and Great Lakes areas. There were 4771 miles of gas lines under construction or authorized by the Federal Power Commission, or more than double the mileage of products and crude lines under construction or authorized. There were 2638 miles of products line and 2099 miles of crude line under construction or authorized by companies.

Big Gas Program

The gas line projects under construction are large. Some of the larger ones follow:

A 951-mile 26 and 30-inch line from Eunice, N. M., to the Los Angeles area. The New Mexico-to-California border portion of this line is being built by El Paso Natural Gas Company and the California section is being constructed by Southern California Gas Company and Southern Counties Gas Company. In addition, El Paso Natural is building more than 100 miles of gas lines from the Eunice terminal to outlying fields where gas will be gathered, and in 1948 will extend the main Eunice-California line to Dumas, Texas, Panhandle, with a 251-mile 24-inch transmission line.

Tennessee Gas and Transmission Company is building 505 miles of loop and extension to its Texas-West Virginia gas transmission system. The company also has application filed with FPC for authority to build 832 miles of 20 to 26-inch loop to this line that supplies a rich market in the Appalachian area.

Mississippi River Fuel Corporation has started construction of 279 miles of 12 and 22-inch loop on its Louisiana-Illinois line.

Northern Natural Gas Company is adding approximately 250 miles of 18 to 24-inch loop to its Texas-Minnesota system. And the company has application filed with FPC to make further major additions to this line.

Panhandle Eastern Pipe Line Company is building 465 miles of 18 to 26-inch loop to its Texas-Michigan system.

Michigan-Wisconsin Pipe Line Company has been authorized by FPC to build a 1069-mile 22 to 26-inch natural gas transmission line from the Texas Panhandle to Michigan. This is the largest of authorized postwar pipe line construction jobs, with work expected to commence this year and completion not expected before early 1949.

Construction of natural gas carrier systems should continue at a high rate for several years.

In addition to these major gas line projects, applications were before the FPC at the end of year for a total of 4780 miles of additional new gas lines. Included here are several large new projects: A 1380-mile 26-inch natural gas line from East Texas to the Atlantic Seaboard in the vicinity of New York and New Jersey by Trans-Continental Pipe Line Company; a 1236-mile 26-inch natural gas transmission line by Mid-Continent Gas and Transmission Company from the Hugoton field in Kansas to St. Paul, Minn., by way of Kansas City; a 405-mile 26-inch line from the Hugoton field in Kansas to Kansas City, Mo., by Cities Service Gas Company, and a 260-mile natural gas line from the Hugoton field to Denver by Colorado Interstate Gas Company.

Only unfavorable action by the FPC can retard an extensive expansion of the nation's natural gas pipe line system during the next several years.

More Products Lines

Construction on products pipe lines was very much in evidence as 1946 ended. Great Lakes Pipe Line Company completed 600 miles of 8-inch products line from Drumright, Okla., to Sioux Falls, S. D. A 500-mile extension of this line from Sioux Falls to Grand Forks, N. D., via several Minnesota communities, was nearing completion at the year's end.

Standard Oil Company (Indiana) is nearing completion a 662-mile 8 and 10-inch products line from Whiting, Ind., to Moorhead, Minn., by way of Minneapolis and St. Paul.

Phillips Petroleum Company and Shamrock Oil & Gas Company are jointly building a 360-mile 6⅝-inch products line from their refineries in the Texas Panhandle to Denver.

The Texas Pipe Line Company and Magnolia Pipe Line Company are jointly building a 449-mile 8 to 12-inch products line in Texas, running from near Beaumont to Dallas and Fort Worth, with a branch from the main line at Hearne running through Austin to San Marcos where it connects with an existing line that will carry petroleum products to the San Antonio area.

Sinclair Refining Company is building 399 miles of 6-inch products line in Ohio and part of Michigan. The lines extend from Sinclair's present East Chicago-Toledo line to Detroit, and from Toledo to Columbus, Cleveland, Marion, Akron, and Youngstown, Ohio, connecting at the latter point with Sinclair's existing Marcus Hook-Steubenville products line.

There were 2099 miles of crude pipe line construction under way or authorized as 1946 ended. Largest authorized was the 650-mile 20-inch crude line by Magnolia Pipe Line Company to move crude from its terminal at Corsicana, Texas, to Patoka, Ill. At Patoka the line will connect with existing Magnolia pipe line facilities and will furnish crude for several Socony-Vacuum refineries in the Great Lakes area.

Stanolind Pipe Line Company is looping with 20-inch its present system from Drumright, Okla., to Whiting, Ind. This will eventually give the company a new 632-mile 20-inch system between these two points.

Standish Pipe Line Company has authorized a 289-mile 12-inch crude line outlet from the Permian Basin sector to its refinery at Borger, Texas Panhandle, with the possibility of extending this line from Borger to tie in with existing company facilities near Oklahoma City.

At the end of 1946 there were 2076 miles of crude lines known to be under study. The Texas Pipe Line Company was studying the possibility of building, with other interests (which probably means Texas-New Mexico Pipe Line Company or Texas-Empire Pipe Line System) a 440-mile 20-inch crude oil outlet from the Permian Basin sector to Cushing, Okla. The Texas Pipe Line Company scrapped a contemplated 572-mile 16-inch crude line from West Texas to Port Arthur to be built by Texas-New Mexico Pipe Line Company, in favor of the West Texas-to-Cushing line.

Phoenix Pipe Line Company, newly organized by Phoenix and Kansas City interests, was talking about a 600-mile crude line from the Permian Basin sector to Phoenix, Ariz. Although there is no refinery located at Phoenix, the same interests also were studying plans to build one to utilize crude moved via the Phoenix Pipe Line Company.

Rangely Outlet

Standard Oil Company (Indiana) contemplates building another outlet from the Rangely field, northwestern Colorado, to Wamsutter, Wyo., and on to Casper. The one existing pipe-line outlet from Rangely is too small for present field production and every time a producer is completed, the allowable take from all other wells is reduced.

Midway Pipe Line Company, to be sponsored by Middle West cooperative refiners, is studying the possibility of building approximately 625 miles of 12 to 16-inch crude line from the Permian Basin sector of West Texas and New Mexico to Valley Center, Kan

Pipe Line Construction in 1946

Alabama

Placid Oil Company, Dallas, completed an 11-mile, 8-inch crude line from the Gilbertown field, Choctaw County, to a tank farm and barge loading terminal on the Tombigbee River.

Arizona

Phoenix Pipe Line Company, newly organized by Phoenix and Kansas City interests, proposes to build a 600-mile, 8-inch crude trunk line from the Permian Basin sector of New Mexico and West Texas to a proposed refinery at Phoenix. Arizona is one of the few states without a refinery or production, present stocks being moved to the state by railway tank cars and trucks.

Arkansas

Arkansas Louisiana Gas Company is building 21 miles of 12¾-inch and 4½ miles of 8⅝-inch natural gas lines as additions to its "L System" that supplies gas to four industrial concerns in Arkansas.

Root Refining Company completed a 19-mile, 4-inch crude line from Wesson field, Ouachita County, to Junction Point on its Shuler El Dorado 6-inch carrier.

California

Southern California Gas Company and **Southern Counties Gas Company** are building a 214-mile, 30-inch natural gas transmission line from Blythe to Santa Fe Springs. This line will connect with El Paso Natural Gas Company's West Texas-California 26-inch line, now

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Pipe Line Construction in 1946

Southern California Gas Company is building a 20½-mile natural gas line between the northern end of the Trico gas field, Kern County, and the 16-inch PG&E Buttonwillow carrier. The new line, third connection into this field, consists of 10-, 8-, 6-, and 4-inch pipe.

Pacific Pipeline Company is building for **Pacific Public Service Company** a natural gas line from the Suisun Bay, Kirby Hill and West Rio Vista gas fields to the Stanpac junction near Pittsburg. The line is made up of 4- to 12-inch pipe with an aggregate length, including all spur lines, of 35 miles.

Standard Oil Company of California completed a 176-mile, 18-inch crude line from Kettleman Hills to the company's Los Medanos tank farm near Pittsburg.

Colorado

Colorado Interstate Gas Company proposes to build a natural gas line from the Hugoton gas field in Kansas to Denver.

Standard Oil Company (Indiana) proposes to build a 12-inch crude outlet from Rangely field to Wamsutter, Wyo., paralleling Utah Oil Refining Company's (Standard of Indiana subsidiary) existing 10-inch line, and a 10-inch extension from Wamsutter to Casper, Wyo.

Phillips Petroleum Company and **Shamrock Oil & Gas Company** are building a 360-mile, 6⅝-inch products line from Phillips' refinery at Phillips, Texas, connecting with Shamrock's refinery at McKee, Texas, to LaJunta and Denver.

Illinois

Chicago District Pipe Line Company completed 23 miles of 24-inch natural gas line between Joliet and Chicago.

Chicago District Pipe Line Company completed 11.6 miles of 24-inch natural gas line paralleling the Crawford line.

North Shore Gas Company, Waukegan, completed 6 miles of 12¾-inch and 2 miles of 10¾-inch distribution lines in Lake County.

Panhandle Eastern Pipe Line Company completed 24 miles of 26-inch natural gas line near its compressor station at Tuscola.

Wood River Oil and Refining Company, Inc., Wichita, Kansas, completed a 70 mile, 8-inch products pipe line from its new marine terminal at Peru to Rockford.

Indiana

Kentucky Natural Gas Corporation completed 30 miles of 6-inch natural gas line from Panhandle Eastern Pipe Line Company's system near Danville to Martinsville.

Eastern Indiana Gas Company completed a 23-mile, 3-inch natural gas line near Muncie.

Standard Oil Company (Indiana) is completing a 662-mile combination 10 and 8-inch products pipe line from Whiting to Moorehead, Minn., via Minneapolis and St. Paul.

Kansas

Cities Service Gas Company proposes to build a 405-mile, 26-inch natural gas transmission line from the Hugoton gas field to Wichita and Kansas City.

Mid-Continent Gas Transmission Company proposes to build 1236 miles of 26-inch natural gas transmission line from Liberal to Kansas City and St. Paul, Minn. The line from Liberal to Kansas City would be at 400-mile double pipe line and the line from Kansas City to St. Paul would be a single 436-mile string.

Kansas-Nebraska Natural Gas Company is building 56 miles of 16-inch and 21 miles of 12¾-inch natural gas line from Phillipsburg to Hastings, Neb. The company is also constructing approximately 100 miles of lateral pipe lines to serve Nebraska communities.

Sinclair Refining Company, pipe line department, is building a 50 mile, 18-inch loop in the vicinity of Iola.

Kentucky

Cincinnati Gas Transportation Company completed 70 miles of 14-inch natural gas line from its main line near Foster to an interconnection with Tennessee Gas and Transmission Company near Means.

Louisiana

Mississippi River Fuel Corporation is building 265 miles of 22-inch loop and 14 miles of 12-inch loop to increase the capacity of its Louisiana-Illinois natural gas transmission line.

United Gas Pipe Line Company is building a 24-mile, 12-inch natural gas transmission line from Barataria, Delta Farms, Bayou Perot and Stella fields to New Orleans. Previously flared gas will be utilized by this line.

United Gas Pipe Line Company is building 17 miles of 12¾-inch natural gas transmission line from a dehydration plant in Hayes field to the Iowa compressor station; 10 miles of 12¾-inch from Baxterville field to Bogalusa transmission line, Mississippi, and completed 14 miles of 10¾-inch from a dehydration plant in Gwinville field to the Benton Junction-Mobile main line, Mississippi.

Humble Oil & Refining Company completed a 10-mile, 4- and 6-inch natural gas line from North Crowley field to its 14-inch Pecan Island-Opelousas main carrier.

Humble Oil & Refining Company completed a 65-mile, 14-inch natural gas transmission line from Pecan Island field to Opelousas.

Interstate Oil Pipe Line Company completed a 35.5-mile, 8-inch crude line from the Holley Ridge field station, Mississippi, to Delhi field, Louisiana.

Interstate Natural Gas Company completed 103 miles of 8-, 12- and 16-inch natural gas line from Tepetate to Baton Rouge.

Magnolia Pipe Line Company completed 14 miles of 4-, 5- and 6-inch crude line in the Lake Arthur area.

Southern Natural Gas Company completed 116 miles of 6⅝-inch to 22-inch natural gas loop on its Louisiana, Mississippi, Alabama and Georgia line.

Michigan

E. V. Hilliard proposes to build 26 miles of 6-inch natural gas transmission line from Roscommon gas field to Wise Junction on Dow Chemical Company's Evart to Midland gas transmission line.

Consumers Power Company and **Panhandle Eastern Pipe Line Company** are building 150 miles of 24-inch natural gas line from Panhandle's present Michigan terminal at Chelsa to the Winterfield and Cranberry Lake shallow gas fields for storage.

Michigan Consolidated Gas Company completed 30 miles of 8-inch natural gas transmission line from Lincoln-Freeman field to Austin storage field, replacing an old 4-inch line.

Panhandle Eastern Pipe Line Company is building 70 miles of 16-inch line from Allen Park to Union Gas Company of Canada's lines across the Detroit River.

Mississippi

United Gas Pipe Line Company proposes to build a gathering system in the Baxterville field and a 12-mile, 12-inch natural gas line from the field west to connect with the company's present system.

Southern Natural Gas Company is building 80 miles of 16-inch natural gas transmission line from Gwinville field to Pickens.

United Gas Pipe Line Company is building 86 miles of 6-inch natural gas line from the Jackson compressor station to Philadelphia, Neshoba County.

Gulf Refining Company completed a 12-mile, 14-inch crude line from Baxterville field to a loading rack at Lumberton.

Interstate Oil Pipe Line Company completed 10¼ miles of 6-inch crude line from the Brookhaven field to the Mallalieu field station.

Interstate Oil Pipe Line Company completed 10½ miles of 8-inch crude line from the Eucutta field, Wayne County, and its loading rack that serves the Heidelberg field, Jasper County.

Interstate Oil Pipe Line Company completed 12 miles of 6-inch and 4 miles of 4-inch crude line from the Fayette field, Jefferson County, to its booster station at Cranfield field.

Sohio Petroleum Company completed a 40-mile, 8-inch line from Tinsley field, Yazoo County, to a terminal on the Mississippi River at Mayersville.

United Gas Pipe Line Company completed a 10- and 12-inch natural gas line from the Gwinville field to its Jackson-Mobile transmission line.

Montana

Montana-Dakota Utilities Company will build 28½ miles of 10¾-inch natural gas line in Valley County.

New Mexico

Midway Pipe Line Company, to be sponsored by middle west cooperative and independent refiners, proposes to build approximately 625 miles of 12- to 16-inch crude trunk line from Southeastern New Mexico and West Texas field via Wichita Falls to Valley Center, Kansas, where the line will connect with existing distribution lines.

El Paso Natural Gas Company is building a 737-mile, 26-inch natural gas transmission line from its Permian Basin terminal, near Eunice to Blythe, Calif., where it connects with a California line now being constructed. El Paso Natural will extend this line in 1948 from Eunice terminal to Dumas, Moore County sector of the Texas Panhandle, with a 251-mile, 24-inch natural gas line.

El Paso Natural Gas Company is building a 31-mile, 14-inch feeder from Jal Station west to the Pecos River where it will intercept the Eunice-Blythe 26-inch carrier. The company is also building a 31 mile, 16-inch feeder line extension from Jal Station to Keystone and TXL fields, West Texas.

El Paso Natural Gas Company is building a 31 mile, 14-inch feeder line extension from the Eunice terminal to Fullerton field, Andrews County, West Texas.

Magnolia Pipe Line Company completed 11¼ miles of 4-inch crude gathering line in the Brunson, Drinkard and Paddock fields to a tank farm near Eunice.

Southern Union Gas Company completed 22 miles of 8-inch natural gas extension line from its 8-inch trunk line near Santa Fe to the Los Alamos atomic bomb project; 10 miles of 10-inch loop parallel to its 8-inch trunk line from Barker Creek Dome to Santa Fe, and 4 miles of 4-inch loop on its gas trunk line from Carlsbad to Potash Center.

Ohio

East Ohio Gas Company completed 144 miles of 18- and 20-inch natural gas line from Pipe Creek, Hope Natural Gas Company's terminal on the Ohio River, to Cleveland.

Ohio Fuel Gas Company completed 19 miles of natural gas gathering lines in Lorain and Medina counties and 25 miles of 16-inch line connecting stations.

Sinclair Refining Company is building 56 miles of 6-inch products line from Toledo to Detroit, 118 miles of 6-inch products line from Toledo to Columbus through Marion, and 225 miles of 6-inch products line from Marion to Cleveland, Akron and Youngstown.

Ohio Fuel Gas Company completed 15 miles of 12¾-inch natural gas line to connect its system with that of the Dayton Power and Light Company.

Ohio Fuel Gas Company completed 18 miles of 5-inch natural gas transmission line from its terminal at Urbana to Bellfontaine.

Oklahoma

Natural Gas Pipe Line Company of America and **Texoma Natural Gas Company** propose to make additions to their combined transportation system. Texoma proopses to make additions to its dehydration and gasoline plants, to its compressor stations, and to build 11 miles of 26-inch loop. Natural Gas Pipe Line proposes to make additions to its compressor stations, construct a new compressor station and dehydration plant near Guymon, and build 120 miles of 24- and 26-inch loop.

Kerr-McGee Oil Industries, Inc., is building a 6-inch crude line from the North Davis field in Garvin County to Wynnewood.

Lone Star Gas Company is building a 21-mile, 10-inch natural gas line from the Cumberland field, Marshall County, to Denison, Texas.

Stanolind Pipe Line Company is looping its Drumright to Whiting, Ind., crude transmission system with 20-inch pipe that will eventually provide a complete 632-mile 20-inch system between the two points.

Sunray Oil Corporation is building 83 miles of 8-inch products pipe line from its Allen refinery to Drumright where it will connect with the Great Lakes Pipe Line Company system.

Stanolind Pipe Line Company replaced a 4-inch gathering line in the Cache Creek field with a new 6-inch line.

Cities Service Gas Company completed a 64-mile, 12-inch natural gas line from West Edmond field to Drumright.

Great Lakes Pipe Line Company completed a 600-mile, 8-inch products

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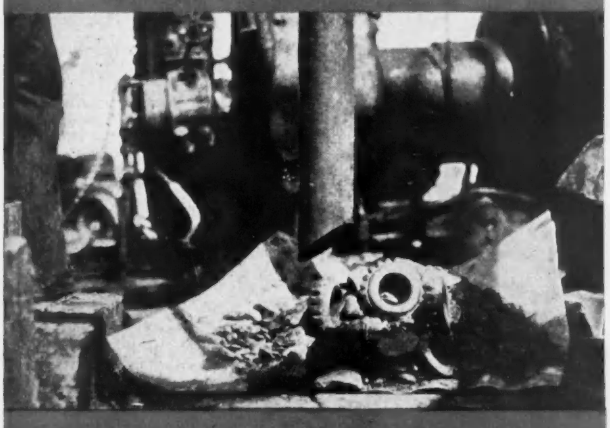

The sand, junk and debris shown in these photographs was removed from producing wells by specialized hydrostatic cleanout tools operated by Cavins Corporation. Cavins cleanout service, the original and largest, includes tools capable of doing thorough cleanout and fishing jobs of all types, in junked or bridged-over holes, in open hole (where formations will permit) or inside casing and tubing.

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Pipe Line Construction in 1946

pipe line from Drumright to Sioux Falls, S. D. A 500-mile, 6- and 8-inch extension of this line from Sioux Falls to Grand Forks, N. D., is nearing completion.

Interstate Oil Pipe Line Company completed a 6-mile, 4-inch crude line from the Lone Grove field to the north end of the old Brock field.

Sunray Oil Corporation completed a 12-mile, 4-inch crude line from the new Grief Creek field in Hughes County to the Greenleaf station.

Pennsylvania

New York State Natural Gas Corporation proposes to build 120 miles of 12¾- and 14-inch loop and 14 miles of 16-inch transmission line in Pennsylvania.

Iriquois Gas Corporation and **United Natural Gas Company** completed 20 miles of 16-inch loop between Little Valley, N. Y., and McKean County, Pa.

Socony-Vacuum Oil Company completed a 300-mile, 8- and 12-inch products pipe line from the Paulsboro, N. J., refinery to Midland.

United Natural Gas Company completed 6½ miles of short natural gas lines in Jefferson and Elk counties.

Tennessee

Southern Natural Gas Company proposes to build 139 miles of 20- and 22-inch natural gas loops permitting it to serve Chattanooga and Lexington, Miss.

Kentucky Natural Gas Corporation completed 18 miles of 10¾-inch natural gas transmission line from Russellville, Ky., to Mitchellville.

East Texas

Trans-Continental Gas Pipe Line Company, Inc., proposes to build a 1380-mile, 26-inch natural gas line from East Texas to the Eastern Seaboard in the vicinity of New York and New Jersey.

Metropolitan Eastern Corporation's proposed 825-mile, 18-inch natural gas transmission line from Carthage field to the vicinity of Hamilton, O., has been postponed indefinitely.

Magnolia Pipe Line Company is building a 650-mile, 20-inch crude line to extend from its trunk line terminal and tank farm near Corsicana to Patoka, Ill., where it will intercept a relay line that serves 8 refineries of the Socony-Vacuum Oil Company in the midwest and east.

Humble Pipe Line Company completed a temporary 4-mile, 4-inch crude line from Mount Sylvan field to the Pure Transportation Company's Van-Smith's Bluff carrier.

Humble Pipe Line Company completed 7 miles of 10-inch loop on its Hawkins-East Texas line.

Lone Star Gas Company completed 79½ miles of 14-inch natural gas transmission line from Carthage field to Opelika field where it connects with the company's main system.

Lone Star Producing Company completed three 7-mile products lines, two 2-inch and one 3-inch, from Carthage field to a loading rack at Carthage townsite.

Magnolia Petroleum Company completed a 4-mile, 3-inch crude line from Opelika field to Lone Star Producing Company's recycling plant where it connects with Gulf's products line.

Pan American Pipe Line Company completed a 4½-mile, 4-inch crude line from Manziel field to its Quitman-East Texas combination 4- and 6-inch line.

Shell Pipe Line Company completed an 18-mile, 4-inch lateral from Douglas station to Rusk station.

Sinclair Refining Company completed an 11-mile, 6-inch natural gas line from Chapel Hill field to the East Texas field.

Talco Pipe Line Company completed an 11-mile, 6-inch, crude line from Merigale field to Coke field, where it connects with the company's discharge line.

North Texas

Continental Pipe Line Company is building 14 miles of 4-inch crude gathering lines in the Hildreth, Lewis Stuart and North Stoneburg fields, Montague County.

Continental Pipe Line Company completed a 20-mile, 4-inch crude line from its booster station in the Swastika field to Ewalt field.

Sinclair Refining Company completed a 5-mile, 4-inch line from the Wilson field to Woodbine field.

The Texas Pipe Line Company completed an 8-mile, 4-inch crude line from National-Tolbert field, Wilbarger County, to connect with its Texas Panhandle-Electra trunk line.

Toronto Pipe Line Company completed 6 miles of 4-inch crude line from a tank car rack site near Mabelle townsite to its gathering systems in the Mabelle, Rendham and Seymour fields, Baylor County.

Texas Panhandle

Northern Natural Gas Company is building approximately 250 miles of 18- to 24-inch loop and extensive additions to compressor stations on its Texas to Minnesota natural gas transmission line. In addition, Northern Natural has an application before the FPC covering other extensive facilities to be added to the line at a cost of nearly $13 million. Included is about 140 miles of loop of the same pipe diameters as those now being constructed.

Panhandle Eastern Pipe Line Company has been authorized by FPC to build 465 miles of 18- to 26-inch loop and lateral natural gas lines on its Texas Panhandle to Michigan system. Other facilities to be constructed by the company include new compressor stations and additions to existing compressor stations.

Michigan-Wisconsin Pipe Line Company has been authorized by FPC to build 1069 miles of 22- to 26-inch natural gas transmission line from Hansford County to the Austin storage field in Michigan. Construction was opposed by Panhandle Eastern Pipe Line Company, which has petitioned for reopening of the hearing that authorized Michigan-Wisconsin to build the line.

Panhandle Eastern Pipe Line Company is building 50 miles of 18-inch natural gas trunk line from the vicinity of Shamrock Oil and Gas Company's natural gas processing plant in Moore County to the Hansford compressor station, and 24 miles of 26-inch line from the Tuscola compressor station paralleling existing loop lines.

South Texas

Sinclair Refining Company is reportedly planning a products line from Corpus Christi to Austin via San Antonio.

Tennessee Gas and Transmission Company is building 410 miles of 26-inch loop on its Texas-West Virginia line. The company has applied to FPC for permission to build 832 miles of 20-, 24- and 26-inch loop to its present Texas-West Virginia system. If authority for construction of the latter line is granted, Tennessee Gas will have a second continuous line from Texas to the Appalachian area.

Tennessee Gas and Transmission Company is building a 95-mile, 16-inch extension from its main line in Nueces County to the San Salvador field in Hidalgo County.

Magnolia Pipe Line Company completed a 35-mile 8-inch loop on its line from the Seeligson field to its Corpus Christi terminal.

Reynosa Pipe Line Company is building a 30-mile, 12-inch natural gas line from La Blanca field through North and South Weslaco fields to the north bank of the Rio Grande.

Humble Pipe Line Company completed an 18-mile, 6-inch crude line from Seeligson field to Canales field.

Sinclair Refining Company completed a 5-mile, 8-inch products line from the company's White Point refinery across Nueces Bay to its second refinery at Corpus Christi.

Southern Pipe Line Company completed a 30-mile, 6-inch crude line from Falls City field to Pettus.

Sun Pipe Line Company completed 84 miles of 10-inch crude line from the Seeligson field near Premont to Aransas Pass, and 34 miles of 8-inch crude line from the Kelsey-Bass field to the Sullivan-Mariposa field.

Upper Gulf Coast of Texas

The Ohio Oil Company will build 7½ miles of natural gas line from the Nada field connecting with Tennessee Natural Gas Transmission Company's 24-inch line near El Campo, and 11 miles of 6-inch natural gas line from the Orange Hill field to Tennessee Gas' line near Wallis.

The Texas Pipe Line Company is building 140 miles of 16- and 22-inch crude line from West Columbia field through Houston to Port Arthur and Port Neches.

The Texas Pipe Line Company and **Magnolia Pipe Line Company** are jointly building a 343-mile, 10- and 12-inch products line from Spindletop to Dallas and Fort Worth with an 80-mile, 8-inch lateral line being built from the line at Hearne to Austin and a 26-mile, 6-inch extension from Austin to San Marcos. At San Marcos the 6-inch line will connect with an existing 6-inch line to San Antonio.

Shell Pipe Line Corporation is building 110 miles of 6-inch products line from Shell Oil Company's natural gasoline plant in the Sheridan field to Houston.

City Industrial Gas Company of Houston completed 5 miles of 14-inch natural gas line from its Magnolia Park gas system near Houston to the old Southwest Emergency Pipe Line which it purchased in 1946. The latter line carried oil from Southwest Texas to Houston during the war.

Humble Pipe Line Company completed a 276-mile, 8-inch products line from Baytown to Irving terminal, between Dallas and Fort Worth.

Humble Oil & Refining Company completed 20 miles of 4- to 20-inch gathering lines in the Friendswood and Clear Lake fields, Harris County.

Katy Operators Committee completed a 50-mile, 6-inch products line from Katy field to a terminal on the Houston ship channel.

Standard Oil Company of Texas completed 11 miles of 6-inch crude line from the mainland to the Smith Point field in Galveston Bay.

Stanolind Oil & Gas Company completed 80 miles of gathering lines in the Hastings field. The new lines tie into Stanolind's new pressure-maintenance plant in the field.

Warren Petroleum Company completed an 82-mile, 6- and 8-inch products line from Lake Creek field, Montgomery County, to Norsworthy Terminal on the Houston ship channel, and on to Texas City.

West Texas

The Texas Pipe Line Company is making a study of constructing, with other interests, a 440-mile, 20-inch line from the Permian Basin to Cushing, Okla.

Lone Star Gas Company proposes to build a 40-mile, 6-inch natural gas line from the Eden gas field in Concho County to its system at Miles.

Humble Pipe Line Company authorized the installation of 41 miles of 4- and 6-inch crude line to handle sweet crude production in Andrews, Ector and Winkler counties to the Wink station and tank farm.

Pasotex Pipe Line Company is building 98 miles of 10¾-inch crude line from Yates field to its terminal at Wink.

Humble Pipe Line Company authorized the installation of 84 miles of 10- and 12-inch loop on its trunk line between McCamey and Kemper terminal and between Kemper and Ingleside.

Phillips Petroleum Company is building 75 miles of 12-inch gasoline loop on its Borger to Wichita, Kansas, line.

Standish Pipe Line Company authorized the construction of 289 miles of 12-inch crude line from Goldsmith to Phillips Petroleum Company's refinery at Borger, Texas Panhandle. The company proposes to build an 8-inch extension of this line from Borger to connect with its system in the Oklahoma City field, Oklahoma.

Stanolind Pipe Line Company authorized the construction of a 45-mile, 16-inch crude line from its Wasson field station to the Fullerton "8500" field and that part of the Fullerton field to the west and south, and 40 miles of 16-inch crude line from the station to Ector County fields, with extensive feeder lines.

Stanolind Pipe Line Company is building a 10-mile, 4-inch extension line from its Texas-Oklahoma 16-inch trunk line to Anton field.

Atlantic Pipe Line Company completed a 48-mile, 8-inch extension to its crude system from its terminal and main line station near Midland to Block 31 field.

■ CONTINUED ON PAGE 186

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Producing Wells and Production in U. S. Oil Fields

PRESENTED in this comprehensive report are figures on the number of producing wells and on current and cumulative production in the United States, by fields. The information has come from numerous authoritative sources, and a brief explanation of the report is here offered.

This is primarily a report on crude oil wells and production. In a few districts it also includes condensate wells and production because separation of the condensate was not available, these being mainly South Louisiana, North Louisiana and Arkansas. Included in the South Louisiana report herewith are approximately 275 condensate wells with December, 1946, production of 7,750 barrels daily and a 1946 total output of 2,900,000 barrels, being located in about 90 fields. North Louisiana data apparently include about 2,000,000 barrels of condensate production in 1946, and the report shows the condensate for some fields. Some condensate is included in Arkansas, and a portion of it likewise is identified.

California data include only crude oil, eliminating the condensate wells and production in the Paloma and South Coles Levee fields.

In the past, these Yearbook reports for Texas included condensate wells and production, but this year, for the first time, they represent only crude oil data. Excluded from Texas data for 1946, therefore, are approximately 900 condensate wells with year-end production of 16,000 barrels daily and a 1946 total output of 5,500,000 barrels, coming from about 250 fields. These fields are scattered over the whole state but nearly 200 are in the Gulf Coast and Southwest Texas.

Production figures as given herewith in the United States Summary differ somewhat from those in the table in this issue on crude oil production by states by years. This is partly because data herewith include some condensate, as stated above, and also because these figures by fields are from private sources and state conservation agencies, whereas the other table mentioned is based on figures of the United States Bureau of Mines.

Field, County	Year of Discovery	Oil Producing Wells at End of 1946			Oil Production (Barrels)		
		Flowing	Art. Lift	Total	Daily at End of 1946	Year 1946	Cumulative Through 1946
U. S. Summary—							
Alabama	1944	1	26	27	970	381,790	617,399
Arkansas	1920	451	2,836	3,287	77,797	28,405,675	693,539,585
California	1876	1,894	20,991	22,885	881,263	315,862,483	7,325,808,705
Colorado	1887	87	293	380	35,524	11,590,575	66,381,689
Florida	1943	2	1	3	250	53,516	96,782
Illinois	1889	89	28,907	28,996	203,555	74,612,935	1,240,125,662
Indiana	1889	4	2,153	2,157	18,420	6,831,191	167,158,082
Kansas	1889	106	27,139	27,245	271,500	96,579,300	1,663,815,358
Kentucky	1860	3	14,621	14,624	28,686	11,003,916	215,342,162
Louisiana	1902	3,276	4,819	8,095	417,312	145,590,774	1,853,275,430
Michigan	1900	340	3,135	3,475	47,098	17,099,097	256,970,841
Mississippi	1933	218	568	786	83,861	24,261,938	127,284,501
Missouri	1889	.....	38	38	135	52,000	390,000
Montana	1916	26	2,573	2,599	24,414	8,884,798	131,768,629
Nebraska	1939	.....	58	58	720	280,320	5,202,184
New Mexico	1913	3,005	1,594	4,599	104,160	36,823,886	495,715,706
New York	1864	.....	22,225	22,225	13,500	4,899,000	159,096,000
Ohio	1860	65	22,907	22,972	8,400	2,938,000	607,455,000
Oklahoma	1891	1,512	51,288	52,800	374,762	137,227,955	5,589,681,230
Pennsylvania	1859	.....	82,998	82,998	35,700	13,067,000	1,076,644,000
Tennessee	1876	.....	22	22	35	12,000	470,000
Texas	1896	37,081	65,678	102,-759	1,996,-065	756,185,814	10,440,935,-375
Utah	1912	.....	.....	.....	.....	.....	205,300
West Virginia	1860	.....	17,211	17,211	7,400	2,947,000	430,022,000
Wyoming	1894	227	3,818	4,045	101,200	38,544,200	706,344,595
Total United States	.....	48,387	375,-899	424,-286	4,732,-727	1,734,135,-163	33,254,346,-315
ALABAMA							
Gilbertown, *Choctaw*	1944	.....	21	21	650	320,215	558,233
Gilbertown, E., *Choctaw*	1945	1	5	6	320	56,575	58,806
Melvin, *Choctaw*	1944	.....	.....	abn'd	.....	.....	360
Total Alabama	.....	1	26	27	970	381,790	617,397
ARKANSAS							
(Data from Arkansas Oil and Gas Commission; Dec., 1946 production estimated)							
Atlanta, Limestone, *Columbia*	1938	40	8	48	4,283	1,563,196	7,815,202
Atlanta, Sandstone, *Columbia*	1943	1	1	2	54	23,281	85,857
Big Creek, Limestone, *Columbia*	1939	.....	.....	abn'd	.....	4,133	168,327
Bradley, *Lafayette*	1925	.....	.....	abn'd	.....	.....	186,705
Bragg (Camden), *Ouachita*	1934	.....	.....	abn'd	.....	.....	37,848
Buckner, *Columbia & Lafayette*	1937	.....	26	26	1,483	541,147	5,877,098
Calhoun, *Columbia*	1944	3	.....	3	116	42,427	142,281
Champagnolle, *Union*	1927	.....	76	76	604	220,380	16,129,569
Columbia, 1 well shut in, *Columbia*	1942	.....	.....	.....	.....	.....	9,529
Dorcheat-Macedonia, Sandstone, Gas, 34 wells shut-in, *Columbia*	1942	27	.....	27	669	244,958	1,521,824
Dorcheat-Macedonia, Sandstone Oil, Cotton Valley, 4 wells shut in, *Columbia*	1943	23	5	28	1,778	649,013	2,609,921
Dorcheat-Macedonia, Limestone, 17 wells shut in, *Columbia*	1939	38	.....	38	1,539	561,870	5,332,350
El Dorado, E., *Union*	1921	.....	45	45	319	116,462	10,014,057
El Dorado, S., *Union*	1920	.....	158	158	741	270,456	49,910,683
Fouke, *Miller*	1940	2	43	45	2,624	957,884	3,442,644
Garland City, *Miller*	1932	.....	5	5	93	33,870	2,297,946
Gum Creek (MacDonald), *Ouachita*	1941	.....	14	14	164	59,923	82,296
Hampton, *Calhoun*	1943	.....	2	2	34	12,361	26,277
Haynesville, *Columbia*	1942	34	.....	34	961	350,608	1,813,677
Hibanks, *Union*	1942	.....	2	2	3	1,073	2,315
Hillsboro, *Union*	1939	.....	58	58	196	71,597	356,738
Irma-Troy, *Nevada*	1921	.....	127	127	1,357	495,127	11,611,096
Lewisville, *Lafayette*	1939	.....	17	17	89	32,529	709,678
Lewisville, West, *Lafayette*	1946	.....	1	1	3	8,683	8,683
Lisbon, *Union*	1925	.....	132	132	147	53,681	7,026,923
Magnolia Limestone, 1 well shut in, *Columbia*	1938	95	15	110	12,914	4,713,152	45,948,019
Magnolia, Cotton Valley, *Columbia*	1943	.....	.....	abn'd	.....	.....	32,062
McKamie, Limestone, Condensate, *Lafayette*	1940	21	.....	21	2,887	1,053,882	5,280,554
McKamie, Cotton Valley, *Lafayette*	1942	.....	.....	abn'd	.....	.....	33,204
Midway, 1 well shut in, *Lafayette*	1942	30	9	39	7,219	2,635,012	11,041,685
Mt. Holly (Old), *Ouachita*	1929	.....	.....	abn'd	.....	.....	117,085
Mt. Holly, Limestone, *Union*	1941	4	7	11	636	232,080	1,157,172
Mt. Holly, Sandstone, *Union*	1943	.....	.....	abn'd	.....	.....	15,344
New London, 1 well shut in, *Union*	1942	2	13	15	882	321,968	1,572,000
Nick Springs, 2 wells shut in, *Union*	1940	.....	6	6	42	15,210	756,538
Nick Springs, Cotton Valley, *Union*	1943	.....	.....	abn'd	.....	.....	6,017
Patton, *Lafayette*	1941	4	.....	4	373	136,143	257,409
Rodessa, *Miller*	1937	.....	51	51	542	197,790	7,415,666
Rodessa, North, Extension, *Miller*	1943	3	.....	3	40	14,511	54,068
Salem Church, *Union*	1944	3	.....	3	35	12,650	21,025
Schuler, Cotton Valley, 4 wells shut in, *Union*	1942	3	18	21	1,243	453,666	2,253,835

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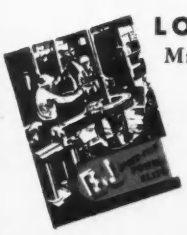

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BJ MEANS ENGINEERED OIL TOOLS

Field, County	Year of Discovery	Oil Producing Wells at End of 1946			Oil Production (Barrels)		
		Flowing	Art. Lift	Total	Daily at End of 1946	Year 1946	Cumulative Through 1946
ARKANSAS—Continued							
Schuler, East, *Union*	1941	1	5	6	287	104,979	879,009
Schuler, Jones, 88 wells shut in, *Union*	1937	28	6	34	8,985	3,279,492	39,646,557
Schuler, Morgan Sand, *Union*	1937	.....	12	12	370	135,157	3,152,859
Schuler- Reynolds, 1 well shut in, *Union*	1937	6	4	10	1,217	444,068	6,335,440
Smackover, *Ouachita & Union*	1922	.....	1,536	1,536	11,365	4,148,025	410,909,322
Spirit Lake, *Lafayette*	1946	3	.....	3	176	64,117	64,117
Stephens (Old), *Ouachita & Columbia*	1922	.....	230	230	599	218,751	7,669,914
Stephens-Smart, *Columbia, Ouachita, Nevada*	1941	.....	108	108	4,435	1,618,615	6,979,810
Stephens, North, *Nevada*	1945	.....	6	6	59	21,614	32,661
Stephens, James Lime, *Ouachita*	1945	.....	6	6	121	44,074	81,898
Strong, Limestone, *Union*	1944	.....	.....	abn'd	.....	3,523	28,397
Strong, Sandstone, *Union*	1945	.....	1	1	23	8,664	11,790
Texarkana, *Miller*	1942	2	.....	2	46	16,880	50,180
Urbana, 1 well shut in, *Union*	1929	.....	61	61	827	301,716	9,099,924
Village, Limestone, *Columbia*	1938	31	6	37	3,146	1,148,315	4,544,340
Village, Sandstone, *Columbia*	1946	5	.....	5	215	78,474	78,474
Village, Travis Peak, *Columbia*	1946	2	1	3	15	5,459	5,459
Wesson, *Ouachita*	1945	40	4	44	1,744	636,650	652,257
Wilks, *Union*	1944	.....	.....	abn'd	.....	.....	10,075
Wilmington, *Union*	1943	.....	2	2	45	16,502	46,763
Woodley (Grimes), *Union*	1922	.....	9	9	30	10,777	79,136
Total Arkansas, wells do do not include 155 shut in	.....	451	2,836	3,287	77,785	28,405,675	693,539,585
CALIFORNIA **California Summary—**							
San Joaquin Valley	.....	1,126	11,580	12,706	423,644	149,780,082	3,161,946,869
Coastal District	.....	383	2,041	2,424	141,714	52,550,307	811,285,818
Los Angeles Basin	.....	385	7,370	7,755	315,905	113,532,094	3,351,465,682
Unclassified, California	.....	.....	.....	.....	.....	.....	1,110,336
Total California	.....	1,894	20,991	22,685	881,263	315,862,483	7,325,808,705
San Joaquin Valley							
Ant Hill, *Kern*	1944	.....	32	32	1,812	511,461	727,452
Antelope Hills, *Kern*	1942	.....	29	29	1,491	572,836	2,789,286
Arvin, *Kern*	1939	.....	2	2	23	8,352	1,620,172
Bellevue, *Kern*	1944	1	2	3	342	138,438	491,675
Belridge, N., *Kern*	1912	55	14	69	5,111	1,956,533	54,577,590
Belridge, S., *Kern*	1911	.....	728	728	10,273	3,903,470	39,029,170
Blackwell's Corner, *Kern*	1941	.....	29	29	250	81,374	136,551
Brundage	1945	.....	.....	.....	.....	.....	1,968
Buena Vista Hills, *Kern*	1909	79	894	973	44,850	14,828,713	329,771,239
Burrel, *Fresno*	1943	.....	2	2	12	4,346	30,189
Canal, *Kern*	1937	24	10	34	2,295	874,220	12,515,550
Canfield Ranch, *Kern*	1938	.....	1	1	29	11,089	152,956
Coalinga, E., *Fresno*	1900	.....	620	620	17,505	6,319,779	255,760,066
Coalinga Nose & Northeast, *Fresno*	1938	183	37	220	58,893	20,509,586	118,777,521
Coalinga, W., *Fresno*	1900	.....	780	780	6,631	2,524,415	158,755,628
Cole's Levee, N., *Kern*	1938	88	2	90	16,150	5,676,587	31,366,103
Cole's Levee, S., Crude Oil, *Kern*	1938	.....	29	29	2,321	660,064	8,879,683
Cymric, *Kern*	1945	33	118	151	10,880	3,047,138	3,047,138
Dyer Creek, *Kern*	1941	.....	.....	abn'd	.....	.....	27,755
Edison, *Kern*	1934	32	214	246	15,250	5,357,880	19,032,261
Elk Hill, *Kern*	1919	.....	154	154	8,300	3,708,412	194,764,628
Fruitvale, *Kern*	1928	.....	189	189	7,284	2,738,575	38,483,297
Gosford, *Kern*	1944	.....	2	2	61	28,684	82,079
Greeley, *Kern*	1936	76	23	99	10,506	3,891,419	28,036,859
Helm, *Fresno*	1941	53	9	62	4,343	1,585,138	3,544,126
Jacalitos, *Fresno*	1941	42	22	64	4,169	1,623,023	3,216,727
Kern Front, *Kern*	1925	.....	605	605	8,716	4,347,023	68,061,284
Kern River, *Kern*	1900	.....	2,204	2,204	9,652	3,609,651	298,202,982
Kettleman Middle Dome, *Kings*	1932	.....	.....	abn'd	.....	.....	544,491
Kettleman North Dome, *Kings-Fresno*	1928	79	197	276	37,990	13,863,888	323,923,641
Lanare (Wheatville, S.E., Extension of Helm Field), *Fresno*	1942	19	4	23	2,325	777,528	1,038,968
Lost Hills, *Kern*	1910	.....	405	405	3,823	1,317,159	58,060,395
McClung, *Kern*	1943	.....	1	1	10	13,344	103,433
McKittrick, *Kern*	1898	.....	240	240	4,500	1,677,406	101,481,934
Midway-Sunset, *Kern*	1900	.....	2,725	2,725	42,564	13,856,172	702,253,671
Mountain View, *Kern*	1933	4	137	141	4,702	1,403,012	46,546,727
Mount Poso, *Kern*	1927	.....	508	508	15,233	5,960,270	92,013,809
Paloma, Crude Oil, *Kern*	1939	32	.....	32	7,371	2,150,240	5,026,730
Pleasant Valley, *Fresno*	1943	19	6	25	3,443	1,305,844	3,785,252
Pyramid Hills, *Kings*	1940	.....	24	24	295	117,940	252,072
Race Track, *Kern*	1944	15	7	22	1,604	499,128	712,214
Raisin City, E., *Fresno*	1941	17	9	26	2,942	1,023,110	3,871,753
Raisin City, W., *Fresno*	1943	13	.....	13			
Rio Brave, *Kern*	1937	82	3	85	12,986	4,857,243	38,329,709
Riverdale, *Fresno*	1941	48	9	57	4,223	1,483,870	5,226,268
Rosedale Ranch, *Kern*	1945	.....	4	4	143	45,924	78,885
Round Mountain, *Kern*	1927	.....	332	332	8,946	3,356,139	50,059,718
Salt Creek	1946	.....	17	17	2,311	383,328	383,328
Santiago, *Kern*	1945	19	9	28	6,304	1,853,443	1,980,352
Shafter, *Kern*	1941	.....	.....	.....	.....	.....	52,703

Field, County	Year of Discovery	Oil Producing Wells at End of 1946			Oil Production (Barrels)		
		Flowing	Art. Lift	Total	Daily at End of 1946	Year 1946	Cumulative Through 1946
CALIFORNIA—Continued							
Sheep Springs, *Kern*	1944	.....	5	5	447	178,986	378,822
Strand, E., *Kern*	1942	7	.....	7	558	209,197	755,622
Strand, W., *Kern*	1939	3	19	22	1,665	670,685	4,106,124
Tejon, *Kern*	1943	.....	53	53	1,889	482,150	706,659
Ten Section, *Kern*	1936	102	17	119	8,938	3,254,630	38,926,367
Union Avenue, *Kern*	1941	.....	3	3	375	135,783	367,634
Wasco, *Kern*	1938	1	6	7	587	273,505	4,563,377
Wheeler Ridge, *Kern*	1923	.....	34	34	227	83,632	4,374,618
Unclassified	.....	.....	55	55	94	28,320	159,667
Total San Joaquin Valley	.....	1,126	11,580	12,706	423,644	149,780,082	3,161,946,869
Coastal District							
Aliso Canyon, *Los Angeles*	1938	25	11	36	3,341	1,111,696	4,837,652
Bradley Canyon, *Santa Barbara*	1945	.....	.....	.....	.....	.....	17,058
Capitan, *Santa Barbara*	1929	9	57	66	3,338	1,267,489	10,810,497
Del Valle, E., *Los Angeles*	1942	16	4	20	1,650	702,105	2,824,451
Del Valle, W., (San Martinez) *Los Angeles*	1942	10	21	31	3,081	1,204,352	3,964,798
Elwood Goleta, *Santa Barbara*	1927	1	69	70	7,213	2,461,618	77,761,818
Gato Ridge, *Santa Barbara*	1931	.....	36	36	3,574	1,421,128	7,324,893
Hasley Canyon, *Ventura*	1945	.....	1	1	.....	.....	332
Newhall-Potrero, *Ventura-Los Angeles*	1937	40	1	41	5,884	2,112,315	9,268,181
Oak Canyon, *Los Angeles*	1941	8	8	16	1,665	643,449	2,240,148
Oxnard, *Ventura*	1937	.....	4	4	652	346,072	658,392
Padre Canyon, *Ventura*	1936	12	16	28	2,335	889,698	2,811,917
Ramona, *Ventura*	1945	.....	25	25	1,908	445,272	524,083
Rincon, *Ventura*	1927	8	90	98	4,133	1,629,683	21,148,572
San Miguelito, *Ventura*	1931	36	8	44	5,675	1,853,135	16,301,204
Santa Barbara, *Santa Barbara*	1929	.....	16	16	73	32,558	3,666,363
Santa Maria-Lompoc, *Santa Barbara*	1902	.....	328	328	13,520	4,872,271	177,823,545
Santa Maria Valley, *Santa Barbara*	1934	33	414	447	30,798	11,974,584	65,679,843
Summerland, *Santa Barbara*	1894	.....	.....	.....	.....	738	3,184,613
Ventura Avenue, *Ventura*	1926	185	342	527	44,906	16,873,073	308,779,731
Ventura-Newhall, *Ventura-Los Angeles*	1885	.....	588	588	7,665	2,590,735	91,086,217
Watsonville, (Sargent), *Santa Clara*	1923	.....	.....	.....	.....	5,765	413,263
Zaca Creek, *Santa Barbara*	1942	.....	2	2	303	112,571	158,246
Total Coastal District	.....	383	2,041	2,424	141,714	52,550,307	811,285,818
Los Angeles Basin							
Alondra (Gardena, W.,) *Los Angeles*	1946	1	.....	1	594	75,949	75,949
Brea Olinda, *Orange*	1897	.....	356	356	11,402	3,967,970	189,484,373
Buena Park, *Orange*	1942	.....	2	2	73	26,237	169,031
Coyote, E., *Orange*	1934	.....	158	158	4,512	1,750,384	52,686,848
Coyote, W., *Orange*	1934	10	159	169	14,708	5,565,080	149,582,847
Dominguez, *Los Angeles*	1923	11	314	325	14,912	5,872,042	167,883,863
East Los Angeles, *Los Angeles*	1946	4	.....	4	668	179,698	179,698
El Segundo, *Los Angeles*	1936	.....	29	29	550	209,224	11,762,727
Huntington Beach, *Orange*	1920	21	856	877	47,899	17,200,833	378,818,045
Hyperion	1946	.....	1	1	152	19,626	19,626
Inglewood, *Los Angeles*	1924	7	287	294	11,979	4,713,610	156,285,353
La Mirada	1946	.....	.....	.....	38	21,125	21,125
Lawndale, *Los Angeles*	1928	.....	2	2	21	7,036	1,168,722
Leffingwell	1946	.....	1	1	53	7,871	7,871
Long Beach, *Los Angeles*	1921	.....	1,121	1,121	24,180	9,131,279	721,598,105
Los Angeles & Salt Lake, *Los Angeles*	1894	.....	87	87	535	166,311	67,238,025
Montebello, *Los Angeles*	1917	7	337	344	7,733	3,127,347	146,074,062
Newport, *Orange*	1925	21	86	107	6,904	1,901,561	2,426,566
Playa Del Rey, *Los Angeles*	1929	.....	119	119	2,133	854,399	53,007,247
Potrero, *Los Angeles*	1927	2	22	24	624	328,072	6,072,305
Richfield, *Orange*	1919	.....	308	308	6,689	2,692,169	109,112,387
Rosecrans, *Los Angeles*	1924	1	182	183	4,904	1,857,623	59,443,602
Sansinena, *Orange*	1945	.....	2	2	79	30,012	50,715
Santa Fe Springs, *Los Angeles*	1921	.....	543	543	16,685	6,140,618	508,980,849
Seal Beach, *Los Angeles*	1926	13	152	165	10,693	3,712,451	105,758,542
Torrance, *Los Angeles*	1922	.....	718	718	8,299	3,147,882	120,241,631
Turnbull Canyon, *Los Angeles*	1941	.....	4	4	130	51,110	447,403
Whittier, *Los Angeles*	1912	.....	160	160	994	373,732	20,239,260
Wilmington, *Los Angeles*	1937	287	1,351	1,638	117,667	40,397,904	321,845,908
Yorba Linda, *Orange*	1942	.....	13	13	95	2,939	752,996
Total Los Angeles Basin	.....	385	7,370	7,755	315,905	113,532,094	3,351,465,682
COLORADO							
Berthoud, *Larimer*	1925	.....	.....	.....	.....	.....	66,137
Boulder, *Boulder*	1902	.....	.....	.....	.....	.....	664,131
Clarks Lake, *Larimer*	1944	.....	5	5	145	57,670	219,181
Florence, *Fremont*	1862	.....	49	49	65	27,375	13,905,549
Ft. Collins, *Larimer*	1923	.....	12	12	12	5,840	2,342,748
Greasewood, 2 wells shut in, *Weld*	1930	.....	.....	.....	.....	.....	479,426
Hamilton (Moffat), *Moffat*	1923	.....	11	11	215	91,250	6,359,649
Hiawatha, *Moffat*	1929	6	2	8	120	51,830	896,631
Iles, *Moffat*	1924	25	4	29	1,220	439,825	11,417,104

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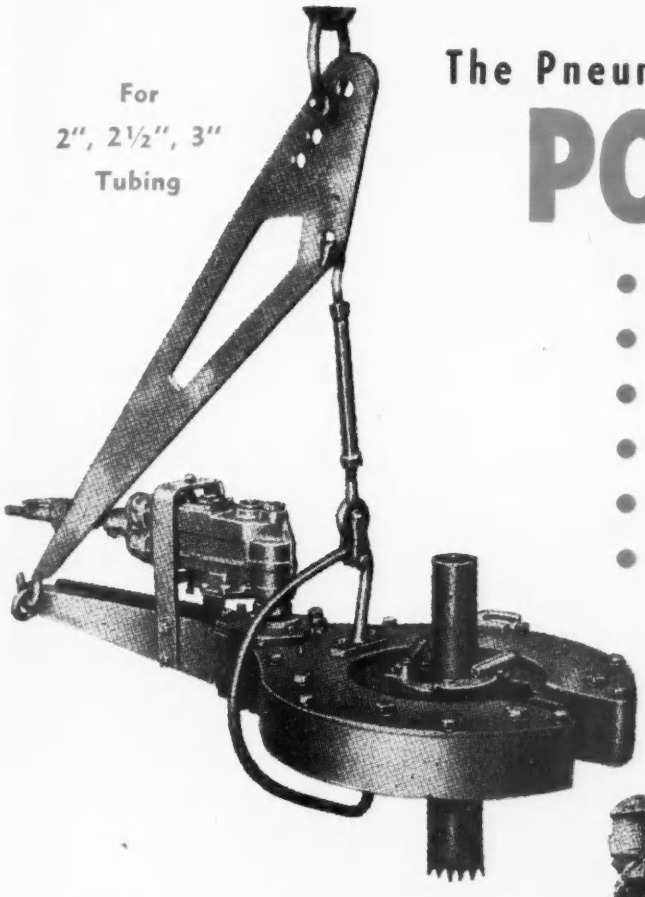

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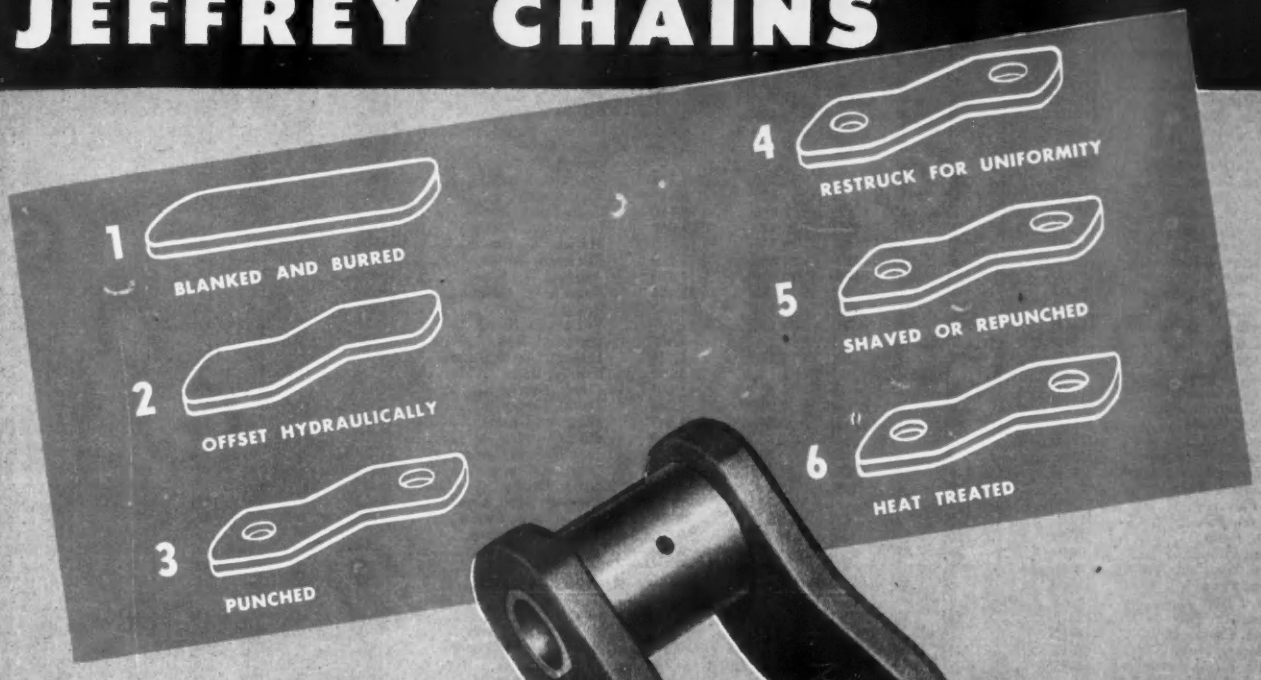
GENERAL OFFICES: TULSA, OKLAHOMA

Field, County	Year of Discovery	Oil Producing Wells at End of 1946			Oil Production (Barrels)		
		Flowing	Art. Lift	Total	Daily at End of 1946	Year 1946	Cumulative Through 1946
COLORADO—Continued							
McCallum, N. & S. and Walden, 1 well shut in, *Jackson*	1927	9	1	10	410	170,820	478,214
Powder Wash, *Moffat*	1936	4		4	52	28,470	264,683
Price, *Arhuleta*	1934		9	9	750	204,400	2,458,595
Rangely, *Rio Blanco*	1919	27	171	198	25,200	8,019,955	11,533,427
Tow Creek, *Routt*	1924		5	5	110	40,515	1,955,674
Wellington, *Larimer*	1924		10	10	275	101,835	5,369,528
Wilson Creek, *Rio Blanco*	1938	16	14	30	6,950	2,352,790	7,970,923
Total Colorado		87	293	380	35,524	11,590,575	66,381,689
FLORIDA							
Sunniland, *Collier*	1943	2	1	3	250	53,516	96,782
Total Florida		2	1	3	250	53,516	96,782
ILLINOIS							
Illinois Summary—							
S. E. Illinois Stripper Area	1904		12,907	12,907	12,125	4,116,470	452,725,149
N. W. Illinois Stripper Area	1914		308	308	255	94,900	3,278,155
Illinois Basin Old Pools	1879		351	351	675	217,175	13,117,137
Illinois Basin New Pools	1937	89	15,341	15,430	190,500	70,184,390	771,005,221
Total Illinois		89	28,907	28,996	203,555	74,612,935	1,240,125,662
Illinois Basin Old Pools							
Bartelso, *Clinton*	1936		43	43	112	44,530	1,509,090
Carlyle, *Clinton*	1911		108	108	90	35,405	3,579,633
Collinsville, *Madison*	1909						850
Junction City, 4 wells shut in, *Marion*	1910						
Sandoval, *Marion*	1909		74	74	30	10,950	5,070,880
Wamac, *Marion*	1921		50	50	33	12,775	506,993
Litchfield, *Montgomery*	1879						22,800
Waterloo, *Monroe*	1920						224,000
Jacksonville Gas, *Morgan*	1910						2,000
Dupo, *St. Clair*	1928		76	76	475	113,515	2,200,891
Total Illinois Basin Old Pools			351	351	740	217,175	13,117,137
Southeastern Illinois (Stripper Area)							
Edgar, Clark, Coles, Crawford, Cumberland, Jasper, Lawrence, Wabash, Counties	1904		12,907	12,907	12,125	4,116,470	452,725,149
Northwestern Illinois (Stripper Area)							
Colmar-Plymouth, McDonough-Hancock Counties	1914		308	308	255	94,900	3,278,155
Illinois Basin New Pools							
Beaver Creek, *Bond*	1942		8	8	32	14,600	56,492
Woburn, *Bond*	1940		25	25	85	34,310	518,695
Bible Grove, *Clay*	1942		184	184	3,590	1,490,660	5,310,864
Bible Grove, E., *Clay*	1944		5	5	20	12,775	42,655
Bible Grove S., *Clay*	1942		1	1	15	7,665	43,618
Iola, *Clay*	1939		107	107	1,405	56,1,005	3,407,214
Ingraham, *Clay*	1942			abn'd			323
Ingraham W., *Clay*	1945		45	45	1,150	547,865	570,932
Passport, *Clay*	1945		4	4	95	39,055	80,879
Sailor Springs, Cons., *Clay*	1941		104	104	1,110	417,925	2,649,705
Sailor Springs E., *Clay*	1944		7	7	30	10,950	39,182
Toliver, *Clay*	1942			abn'd			6,145
Bartelso (Devonian), *Clinton*			23	23	125	52,195	769,316
Boulder, *Clinton*	1942	1	31	32	1,225	482,530	2,536,848
Hoffman, *Clinton*	1939		40	40	80	31,755	546,435
Posey, *Clinton*	1941		1	1		365	5,558
Mattoon, *Coles*	1940		353	353	9,100	4,287,290	4,783,782
New Bellair, *Crawford*	1942			abn'd			6,945
Albion, *Edwards*	1940		203	203	1,875	898,265	5,711,234
Bennington S., *Edwards*	1944			abn'd			10,311
Ellery, *Edwards*	1941		2	2	15	6,205	49,517
Maple Grove, *Edwards*	1943		33	33	510	245,280	943,403
Maple Grove, E., *Edwards*	1944		3	3	2	365	16,100
Samsville, N., *Edwards*	1945		10	10	135	46,355	49,487
Louden, *Fayette*	1937	86	1,854	1,940	21,500	8,243,160	129,480,119
St. James, *Fayette*	1938		176	176	1,825	706,275	9,234,674
St. Paul, *Fayette*	1941		11	11	90	41,245	331,488
Akin, *Franklin*	1941		7	7	70	32,850	283,382
Benton, *Franklin*	1941		231	231	2,275	927,465	18,769,020
Sesser, *Franklin*	1942		4	4	30	13,505	77,696
Thompsonville, *Franklin*	1940		6	6	5	4,015	328,809
Inman, *Gallatin*	1940		2	2	25	10,950	87,221
Inman, E., *Gallatin*	1940		96	96	1,175	472,675	3,549,854
Inman, N., *Gallatin*	1941			abn'd			9,302
Inman, W., *Gallatin*	1942		20	20	125	51,830	441,211
Junction, *Gallatin*	1939		15	15	35	13,140	239,380
New Haven, W., *Gallatin*	1944		16	16	295	123,735	327,474
Belle Prairie, *Hamilton*	1941		5	5	95	43,800	240,286
Blairsville, *Hamilton*	1942		29	29	365	146,365	1,415,817
Bungay, *Hamilton*	1941		61	61	1,750	427,050	1,702,333
Dahlgren, *Hamilton*	1941		14	14	75	35,770	967,921
Dale-Hoodville, *Hamilton*	1941		398	398	3,700	1,478,980	22,719,729
Rural Hill, *Hamilton*	1941		192	192	1,450	509,905	9,242,774
Springerton, *Hamilton*	1945		12	12	350	131,765	148,594
Thackery *Hamilton*	1944		45	45	1,575	661,015	1195,876
Walpole, *Hamilton*	1941		66	66	1 125	420,115	3,487,510
Elkville, *Jackson*	1941		1	1	1	186	3,201
Boos, N., *Jasper*	1940		73	73	950	449.680	3,176,305
Hidalgo, *Jasper*	1940			abn'd			9,976
Boyd, *Jefferson*	1944		102	102	3,975	1,497,230	3,004,395
Divide, W., *Jefferson*	1944		44	44	950	698,975	1,782,373
Dix, *Jefferson*	1938		80	80	1,125	402,960	4,922,850
King, *Jefferson*	1942		30	30	325	130,305	772,019
Markham City, *Jefferson*	1942		17	17	190	71,905	910,720
Markham City, W., *Jefferson*	1945		26	26	2,525	334,340	335,336
Roaches, *Jefferson*	1938		10	10	50	19,710	522,152
Roaches, N., *Jefferson*			34	34	470	208,050	739,684
Woodlawn, *Jefferson*	1940		137	137	2,050	791,685	9,725,109
Marine, *Madison*	1943		107	107	3,650	1,208,150	2,532,426
St. Jacob, *Madison*	1940		49	49	625	257,690	1,702,358
Alma, *Marion*	1941		3	3	10	4,015	57,511
Centralia, *Marion*	1937		621	621	4,675	1,887,050	29,567,111
Fairman, *Marion*	1939		28	28	160	69,715	1,167,969
Odin, *Marion*	1945		21	21	305	138,700	222,764
Patoka, *Marion*	1937		129	129	4,450	1,650,530	6,745,496
Patoka, E., *Marion*	1937		55	55	610	237,980	2,698,375
Salem, *Marion*	1938	2	2,391	2,393	15,650	5,966,655	198,192,510
Sandoval (Devonian), *Marion*	1938		24	24	215	89,425	2,626,806
Tonti, *Marion*	1939		63	63	1,125	405,515	7,717,379
Tamaroa, *Perry*	1942		4	4	3	1,095	9,357
Amity, *Richland*	1942		1	1	6	1,825	9,106
Bompas, *Richland*	1941		2	2	25	10,585	97,395
Calhoun, *Richland*	1944		58	58	1,975	717,225	1,270,090
Dundas Cons., *Richland*	1939		368	368	2,425	935,495	16,115,742
Gallagher, *Richland*	1945		21	21	2,150	334,705	336,569
Noble, *Richland*	1937		263	263	4,300	1,882,670	21,541,018
Noble, S., *Richland*	1937		10	10	70	25,550	576,602
Olney, *Richland*	1937		35	35	200	73,730	1,647,141
Parkersburg, *Richland*	1941		77	77	1,950	505,160	4,222,621
Parkersburg, W., *Richland*	1943		2	2	25	10,585	61,939
Lakewood, *Shelby*	1941		7	7	75	16,060	52,219
Allendale, *Wabash*	1941		176	176	1,525	539,105	2,896,008
Friendville, *Wabash*	1942		36	36	400	122,275	564,544
Keensburg, *Wabash*	1939		324	324	1,750	663,205	11,143,867
Lancaster, *Wabash*	1940		77	77	775	317,915	1,837,769
Lancaster, W., *Wabash*	1943		5	5	26	13,870	116 479
Maud, *Wabash*	1940		13	13	55	21,900	424,542
Mt. Carmel, *Wabash*	1940		345	345	2,550	867,970	6,760,606
Patton, W., *Wabash*	1943		1	1		63,145	251,457
Cordes, *Washington*	1939		133	133	690	267,545	3,434,687
Dubois, W., *Washington*	1942		8	8	38	1,095	8,333
Irvington, *Washington*	1940		85	85	805	313,535	3,924,571
Aden, *Wayne*	1938		87	87	790	306,965	5,051,231
Barnhill, *Wayne*	1939		58	58	235	84,315	1,952,559
Boyleston-Covington, *Wayne*	1938		149	149	1,235	481,435	7,679,476
Cisne, N., *Wayne*	1937		2	2	4	1,825	12,582
Clay City, Cons., *Wayne*	1937		1,122	1,122	20,500	5,309,290	45,998,546
Coil, *Wayne*	1942		16	16	205	84,680	980,505
Coil, W., *Wayne*	1942		11	11	170	73,730	315,482
Geff, *Wayne*	1941		42	42	765	250,755	1,103,855
Geff, W., *Wayne*	1942		4	4	35	12,410	72,949
Goldengate, *Wayne*	1941		36	36	730	271,195	1,412,016
Johnsonville-Sims, N., *Wayne*	1941		299	299	2,775	1,206,325	18,473,184
Johnsonville, S., *Wayne*	1942			abn'd			14,620
Johnsonville, W., *Wayne*	1943		2	2	30	6,205	10,668
Keensville, *Wayne*	1945		26	26	850	345,290	348,210
Mt. Erie, S., *Wayne*	1942		5	5	100	40,515	207,647
Mayberry, *Wayne*	1941		5	5	75	23,360	247,245
Sims, *Wayne*	1941		65	65	610	250,755	3,571,890
Brownsville, *White*	1945		93	93	4,125	1,475,330	1,662,087
Burnt Prairie, *White*	1940		35	35	265	127,385	896,293
Carmi, N., *White*	1942		3	3	40	15,330	98,407
Centerville, *White*	1940		5	5	55	24,090	274,497
Epworth, *White*	1941		8	8	73	25,550	252,782
Grayville, *White*	1941		18	18	190	74,825	585,406
Herald, *White*	1940		95	95	2,550	707,005	1,094,718
Herald, W., *White*	1942		1	1	10	3,650	14,709
Iron, *White*	1940		58	58	325	128,845	3,236,703
Maunie, *White*	1941		2	2	4	5,110	40,690
Mill Shoals, *White*	1939		120	120	765	293,825	4,095,651
New Harmony, Cons., *White*	1939		737	737	7,990	2,865,980	34,983,679
New Haven, *White*	1941		22	22	130	49,640	551,454
Phillipstown, *White*	1939		167	167	2,450	1,038,425	5,019,170
Roland, *White*	1940		161	161	1,890	752,265	6,619,214
Stokes, *White*	1939		63	63	1,235	409,530	2,289,453
Storms, *White*	1939		145	145	825	304,410	5,055,287
Total Above Pools		89	14,207	14,296	176,469	64,959,966	743,096,962
Unclassified, Basin New Pools			1,134	1,134	14,031	5,224,424	27,908,259
Total Illinois Basin New Pools	1937	89	15,341	15,430	190,500	70,184,390	771,005,221

The Why of Side Bar Strength in
JEFFREY CHAINS



See for yourself why Jeffrey Devil Dog chains will take the gaff far better than ordinary chains. The extra steps shown here take longer, but make Jeffrey side bars last longer. And remember, every part of every Jeffrey chain is entirely Jeffrey-made. Specify them.

DEVIL DOG API-3

JEFFREY

ESTABLISHED 1877

THE JEFFREY MANUFACTURING COMPANY, 985-99 North Fourth Street, Columbus 16, Ohio

Field, County	Year of Discovery	Oil Producing Wells at End of 1946			Oil Production (Barrels)		
		Flowing	Art. Lift	Total	Daily at End of 1946	Year 1946	Cumulative Through 1946
INDIANA							
New Development							
Glendale, N., *Daviess*	1945		1	1	2	520	1,105
Griffin-Posey	1938		463	463	4,650	1,731,560	20,845,691
Columbia, *Gibson*	1943		5	5	6	2,555	9,743
Fleener, *Gibson*	1940			abn'd			4,543
Francisco, *Gibson*			8	8	15	6,570	115,086
Grand Rapids, *Gibson*	1946		1	1	5		
Haselton, *Gibson*	1941		29	29	95	39,785	544,674
Johnson, *Gibson*	1941		1	1	2	612	9,557
Johnson, W., *Gibson*	1945		1	1	12	7,665	11,167
Kirksville, *Gibson*	1941		27	27	125	55,480	305,092
Lyle, *Gibson*	1945		3	3	20	18,250	28,378
Mt. Carmel, *Gibson*	1941		8	8	410	61,685	74,718
Mt. Carmel, E., *Gibson*	1945		29	29	490	173,010	177,410
Mt. Carmel, N., *Knox*	1943		4	4	6	2,555	23,554
Owensville, N., *Gibson*	1943		62	62	1,575	739,125	1,196,547
Owensville, S., *Gibson*	1944		3	3	25	11,680	44,297
Patoka, *Gibson*	1941			abn'd			4,925
Princeton, N., *Gibson*	1946		2	2	80	5,110	5,110
Simpson, *Gibson*	1940			abn'd			5,204
Somerville, *Gibson*	1944		2	2	5	1,460	11,905
Union-Bowman, *Pike*	1946		2	2	55	7,665	7,665
Wheeling, *Gibson*	1943		38	38	265	83,585	168,617
Decker, *Knox*	1944		5	5	95	28,835	63,208
St. Francisville, *Knox*	1942		2	2	2	730	2,985
St. Francisville, E., *Knox*	1943		5	5	70	16,425	35,407
St. Thomas, *Knox*	1940		5	5	8	2,920	84,034
Cato, *Pike*	1946		1	1		60	60
Spurgeon, *Pike*	1941		2	2	12	3,650	43,187
Bufkin, *Posey*	1940		10	10	50	24,455	208,097
Caborn, *Posey*	1940		39	39	410	148,555	1,025,048
Caborn, W., *Posey*	1941		5	5	15	6,935	57,130
College, *Posey*	1940		6	6	18	7,665	124,094
Crunk, *Posey*	1945		1	1	7	3,650	6,452
Farmersville, *Posey*	1945		15	15	175	52,560	56,065
Grafton, *Posey*	1942			abn'd			637
Half Moon, *Posey*	1942		1	1	4	2,555	13,613
Heusler, *Posey-Vanderburg*	1938		48	48	330	125,560	1,484,453
Hovey Lake, 1 well shut in, *Posey*	1942						5,523
Hovey Lake, W., *Posey*	1944		1	1	5	2,190	6,599
Inman, E., *Posey*	1943		24	24	495	196,005	619,516
Jeffries, *Posey*	1945		9	9	235	51,465	60,176
Lamontt, *Posey*	1941		6	6	22	10,585	66,519
Mt. Vernon, *Posey*	1941		26	26	925	373,395	2,368,565
Mumford, *Posey*	1939		6	6	38	16,425	172,253
New Harmony, *Posey*	1939		32	32	1,095	415,005	3,315,237
New Harmony, E., *Posey*	1946		2	2	220	15,695	15,695
New Harmony, S., *Posey*	1944		61	61	2,995	1,204,500	1,432,3201
New Haven, 1 well shut in, *Posey*	1942						21,871
Point, *Posey*	1942		1	1	5	2,555	36,447
Prairie, *Posey*	1942		2	2	5	1,095	13,440
Ridge, *Posey*	1942			abn'd			3,751
Rogers, *Posey*	1943			abn'd			5,706
Rogers, E., *Posey*	1943		4	4	30	14,600	49,123
Springfield, *Posey*	1946		1	1	5	1,825	1,825
Springfield, N., *Posey*	1946		10	10	355	84,315	84,315
Stooker, *Posey*	1942		1	1	15	6,935	47,705
St. Wendall, E., 1 well shut in, *Posey*	1945					119	769
Upton, *Posey*	1944		15	15	405	179,580	507,848
Weliborn, *Posey*	1941		3	3	17	8,030	31,847
Eureka, 1 well shut in, *Spencer*	1942						3,157
Balance, *Spencer*			73	73	280	101,470	245,833
Dodds Ridge, *Sullivan*	1942	4	2	6	155	60,955	404,280
Vaughn, *Vanderburg*	1942			abn'd			1,219
Veron Heights, *Vanderburg*	1941		20	20	395	73,365	277,984
Prairie Creek, *Vigo*	1937		13	13	125	50,735	857,917
Millersburg, *Warrick*	1941			abn'd			2,748
Total New Development		4	1,146	1,150	16,860	6,244,271	37,459,527
Old Development							
Bristow, *Perry*	1929		43	43	35	6,570	110,314
Canfield, *Cannelsburg*, Princeton, and Oakland, *Daviess, Pike*	1907		522	522	840	310,980	15,113,152
Shelburn, *Sullivan*	1911		336	336	355	135,780	4,071,926
Siosi, *Sullivan, Vigo*	1926		42	42	215	61,320	3,032,357
Troy, *Spencer*							1,127,172
St. Wendells, *Posey-Vanderburg*			64	64	115	45,260	938,079
Total Above Old Development			1,007	1,007	1,560	559,910	24,393,000
Total Above Fields		4	2,153	2,157	18,420	6,804,181	61,852,527
Miscellaneous other Prod. (incl. old shallow prod. in "Trenton" pool in *Huntington, Jay and Wells Counties*)						27,010	105,305,555
Total Indiana		4	2,153	2,157	18,420	6,831,191	167,158,082

Field, County	Year of Discovery	Oil Producing Wells at End of 1946			Oil Production (Barrels)		
		Flowing	Art. Lift	Total	Daily at End of 1946	Year 1946	Cumulative Through 1946
KANSAS							
Sun City, *Barber*	1941	3	8	11	895	264,260	792,752
Whelan, *Barber*	1934	1	18	19	450	171,915	1,509,700
Albert, *Barton*	1935		22	22	245	102,200	1,317,362
Beaver, *Barton*	1934		23	23	360	135,780	1,816,366
Bloomer, *Barton*	1936		274	274	8,125	2,749,180	24,310,781
Boyd, *Barton*	1942		29	29	970	310,980	729,503
Carroll, *Barton*	1945		15	15	365	136,145	176,414
Eberhart, *Barton*	1935		7	7	90	34,310	299,008
Hiss, *Barton*	1936		13	13	395	144,540	660,043
Kraft-Prusa, *Barton*	1937		487	487	15,825	5,257,460	24,781,501
Lanterman, *Barton*	1935		11	11	85	45,990	752,488
Merten, W., *Barton*	1946	1	9	10	535	87,690	87,690
Pritchard, *Barton*	1944		12	12	380	126,655	265,925
Augusta, N., *Butler*	1914		58	58	235	89,069	16,619,050
Augusta, S., *Butler*	1916		112	112	470	191,260	43,816,359
Brandt, *Butler*	1936		58	58	265	104,755	1,340,338
El Dorado, *Butler*	1917		1,620	1,620	7,025	2,618,145	192,781,775
Haverhill, *Butler*	1927		73	72	285	109,500	3,819,315
Hickory Creek, *Butler*	1946		13	13	510	120,450	120,450
Seward, *Butler*			14	14	25	9,490	1,010,547
Couch, *Cowley*	1937		38	38	1,050	23,425	1,131,589
David, *Cowley*	1935		26	26	110	49,640	900,868
Eastman, *Cowley*	1924		25	25	105	37,230	2,631,034
Falls City, *Cowley*	1916		8	8	20	9,125	1,241,547
Frog Hollow, *Cowley*	1937		44	44	1,010	391,280	2,706,396
Graham, *Cowley*	1924		9	9	43	19,345	2,621,481
Hittle, *Cowley*	1926	18	43	61	1,690	580,350	6,660,846
Rainbow Bend, *Cowley*	1923		115	115	595	224,475	14,520,726
Slick-Carson, *Cowley*	1924		16	16	80	29,200	3,316,119
Weathered, *Cowley*	1935		20	20	110	50,370	2,444,112
Bemis-Shutts, *Ellis*	1935		481	481	15,250	5,304,910	42,982,266
Blue Hill, *Ellis*	1937		16	16	360	124,100	1,099,020
Burnett, *Ellis*	1937		210	210	8,350	2,872,550	24,765,695
Pleasant, *Ellis*	1944		17	17	450	168,995	360,334
Walters, *Ellis*	1945		40	40	895	327,040	3,513,524
Lorraine, *Ellsworth*	1934		45	45	365	151,110	9,757,204
Stoltenberg, *Ellsworth*	1931		295	295	7,250	2,746,625	22,141,616
Morel, *Graham*	1938		66	66	3,475	1,098,285	4,105,375
Halstead, *Harvey*	1929		23	23	160	68,255	1,662,340
Hollow-Nikkel, *Harvey*	1931		49	49	465	181,405	20,037,612
Cunningham, *Kingman*	1931		122	122	1,025	429,605	5,906,274
Hillsboro, *Marion*	1927		9	9	85	32,850	2,058,834
Lost Springs, *Marion*			175	175	1,150	456,250	6,852,173
Bornholdt, *McPherson*	1937		145	145	3,120	1,057,040	10,110,505
Chindberg, *McPherson*	1929		27	27	140	51,465	1,602,629
Crowther, *McPherson*	1942		43	43	1,650	421,575	1,149,363
Graber, *McPherson*	1934		124	124	625	248,565	8,420,288
Henne, *McPherson*	1940		25	25	345	148,190	1,027,730
Jenday, *McPherson*	1944		33	33	490	242,725	448,378
Johnson, *McPherson*	1942		12	12	110	51,830	3,038,508
Lindsborg, *McPherson*	1942		109	109	1,825	684,740	3,557,133
McPherson, *McPherson*	1942		24	24	120	50,005	1,152,356
Paden, *McPherson*	1943		24	24	825	187,245	489,792
Ritz-Canton, *McPherson*	1929		205	205	1,890	720,510	39,324,573
Roxbury, *McPherson*	1938		37	37	630	236,155	2,271,672
Voshell, *McPherson*	1929		75	75	1,275	518,665	26,430,688
Aldrich, *Ness*	1929		19	19	455	192,720	1,255,357
Arnold, *Ness*	1944		5	5	130	54,750	55,812
Pawnee Rock, *Pawnee*	1936		25	25	235	102,930	1,504,187
Ryan, Southeast, *Pawnee*	1945		7	7	325	40,515	41,328
Dayton, *Phillips*	1941		22	22	220	86,505	676,609
Ray, *Phillips*	1940		86	86	3,650	1,212,895	5,608,946
Carmi, *Pratt*	1942		91	91	2,525	986,230	5,173,335
Chitwood, *Pratt*	1943	50	25	75	2,750	989,075	2,481,938
Coats, *Pratt*	1944		5	5	150	54,020	107,338
Iuka, *Pratt*	1937		20	20	455	161,330	1,090,369
Stark, *Pratt*	1943		16	16	385	160,965	621,728
Burrton, *Reno*	1931		333	333	3,220	1,208,515	40,986,344
Hilger, *Reno*	1934		21	21	170	70,810	3,146,521
Lerado, 1 well shut in, *Reno*	1935					4,015	2,582,709
Peace Creek, *Reno*	1941		127	127	4,025	1,418,755	9,088,207
Chase, *Rice*	1931		382	382	7,050	2,765,605	43,157,037
Edwards, *Rice*	1936		98	98	3,075	1,039,155	8,022,264
Geneseo, *Rice*	1934		195	195	6,575	2,180,875	19,265,037
Haferman, *Rice*	1936		11	11	240	66,795	895,246
Orth, *Rice*	1932		20	20	310	114,975	1,395,964
Ploog, *Rice*	1930		8	8	50	18,615	1,439,943
Raymond, *Rice*	1930		60	60	1,420	496,400	9,462,368
Silica, *Rice*	1931		719	719	13,950	5,195,410	72,173,130
Smyres, *Rice*	1942		22	22	625	199,290	1,045,164
Welch, *Rice*	1924		29	29	320	113,150	4,712,219
Wenke, *Rice*	1935		10	10	375	135,050	934,752
Wherry, *Rice*	1933		86	86	620	263,530	9,819,496
Barry, *Rooks*	1943		26	26	1,950	586,555	1,679,074
Hobart, *Rooks*	1944		3	3	15	6,205	31,155
Laton, *Rooks*	1927		95	95	485	197,830	2,833,397
Vohs, *Rooks*	1945		19	19	825	180,310	193,085
Westhusin, *Rooks*	1936		21	21	245	108,040	1,008,983
Otis, *Rush*	1934		29	29	650	264,625	3,077,105
Atherton, *Russell*	1935		31	31	315	136,145	1,902,993
Atherton, N., *Russell*	1939		2	2	45	20,440	32,815
Big Creek, *Russell*	1935		135	135	2,025	763,580	8,805,461
Fairport, *Russell*	1935		150	150	2,175	726,350	18,538,333
Gorham, *Russell*	1941		281	281	4,960	1,891,065	30,958,633
Hall-Guerney, *Russell*	1931		625	625	9,225	3,454,725	30,553,184
Janne, *Russell*	1944		6	6	38	18,250	72,750
Russell, *Russell*	1934		67	67	1,550	609,915	7,022,977
Trapp, *Russell*	1939		1,170	1,170	30,100	11,041,615	83,909,192
Hunter, *Saline*	1943		19	19	350	160,965	572,977
Shallow Water, *Scott*	1934		12	12	270	98,550	1,548,557
Clearwater, *Sedgwick*	1944		5	5	55	21,900	45,952
Eastborough, *Sedgwick*	1938		29	29	235	89,060	8,634,065
Goodrich, *Sedgwick*	1928		31	31	405	148,190	4,070,954

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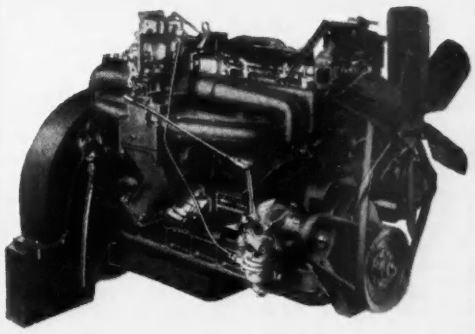
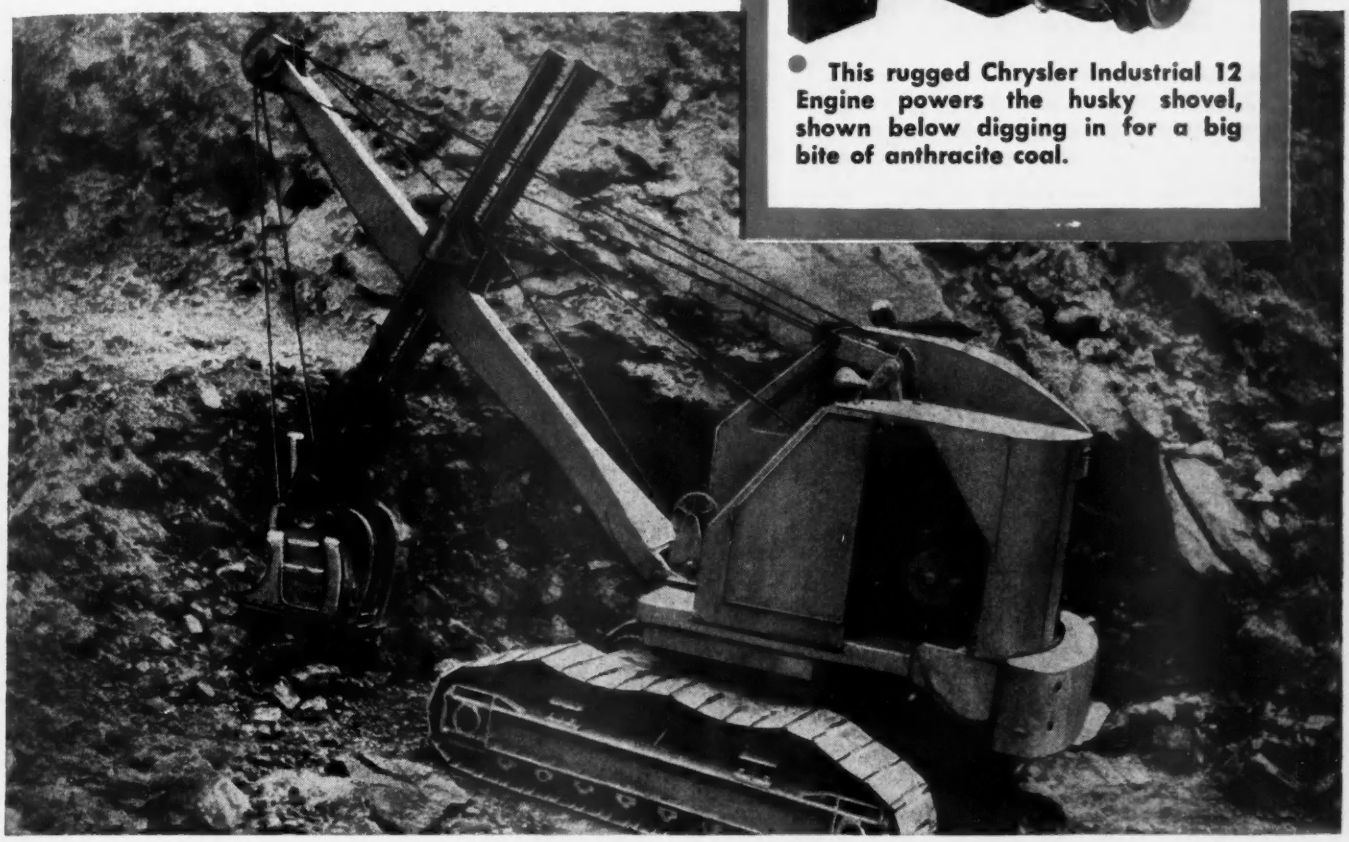
Field, County	Year of Discovery	Oil Producing Wells at End of 1946			Oil Production (Barrels)		
		Flowing	Art. Lift	Total	Daily at End of 1946	Year 1946	Cumulative Through 1946
KANSAS—Continued							
Greenwich, *Sedgwick*	1929		38	38	580	214.9865	10,337,022
Robbins, *Sedgwick*	1929		49	49	170	60,590	3,302,579
Valley Center, *Sedgwick*	1928		56	56	425	155,490	21,374,187
Adell, *Sheridan*	1945		22	22	680	200,020	410,357
Bedford, *Stafford*	1943		17	17	210	109,865	1,068,023
Brock, *Stafford*	1944		6	6	95	50,370	82,271
Drach, *Stafford*	1943		45	45	1,385	488,735	2,240,160
Gates, *Stafford*	1933		13	13	240	101,470	1,314,842
Jordan, *Stafford*	1936		7	7	95	40,515	578,594
Kipp, *Stafford*	1936		11	11	75	35,405	494,929
Leesburg, *Stafford*	1938		16	16	610	208,780	1,772,669
Max, *Stafford*	1938		12	12	415	139,795	810,728
Richardson, *Stafford*	1930		60	60	2,025	676,345	7,794,530
St. John, *Stafford*	1935		25	25	355	135,780	2,032,875
Sittner, *Stafford*	1937		46	46	1,320	397,485	1,207,508
Snider, S., *Stafford*	1938		11	11	270	98,915	599,123
Stafford, *Stafford*	1940		21	21	665	236,885	2,001,433
Zenith, *Stafford*	1937		380	380	3,210	1,521,320	22,352,767
Bellman, *Sumner*	1945		7	7	180	50,300	51,956
Caldwell, *Sumner*	1929		4	4	78	32,485	1,244,649
Churchill, *Sumner*	1926		62	62	465	167,535	19,092,249
Oxford, *Sumner*	1927		43	43	365	143,810	15,362,865
Padgett, *Sumner*	1924		15	15	155	54,385	2,188,708
Wellington, *Sumner*	1929		100	100	825	239,440	5,889,787
Total Above Data		73	11,915	11,988	218,844	78,414,705	1,175,161,167
Kansas, Unclassified		33	15,224	15,257	52,656	18,164,595	488,654,191
Total Kansas		106	27,139	27,245	271,500	96,579,300	1,663,815,358
KENTUCKY							
New Development							
Anthoston, *Henderson*	1946			abn'd		934	934
Barnett Creek, *Ohio*	1943		1	1			607
Barnsley, *Hopkins*	1944						168
Belton, *Muhlenberg*			4	4	15	8,030	69,632
Birk City, *Daviess-Henderson*	1938		115	115	485	184,690	2,823,367
Cairo, *Henderson*	1943		1	1			4,567
Caney Mound, *Union*	1945		1	1		1,470	1,891
Chapman, *Union*	1943			abn'd			7,385
Clay, *Webster*	1943		7	7	14	6,935	21,400
Clay, E., *Webster*	1944		2	2			1,774
Corydon, *Henderson*			5	5	20	10,950	218,762
Corydon, E., *Henderson*	1945		3	3	15	16,790	21,535
Curdsville, *Daviess*	1944		1	1	6	1,825	6,575
Dixie, *Henderson*	1945		44	44	1,835	766,865	1,020,175
Geneva, *Henderson*	1943		18	18	150	67,525	265,299
Gilmore, *Henderson*	1938		11	11	155	61,320	294,059
Grassy Pond, *Henderson*	1945		3	3	10	4,745	10,220
Greenbriar, *Henderson*	1943		2	2	7	3,255	11,388
Griffith, *Daviess*	1946		1	1	4		
Hebbardsville, *Henderson*	1940		13	13	55	22,265	225,814
Henderson, *Henderson*	1945	1	11	12	575	117,165	121,545
Hittesville, Cons., *Union*	1943	2	88	90	1,950	846,070	2,713,155
Livermore, E., *Ohio*	1945		1	1		30	123
Livermore, N., *McLean*	1943		3	3	3	3,650	24,068
McKinley, *Henderson*	1944		5	5	32	12,410	36,529
Morganfield, *Union*	1943		11	11	205	81,030	311,331
Panther, *Daviess*	1943		23	23	235	82,490	256,218
Piney, *Crittenden*	1945		2	2	2	1,460	2,190
Poole, Cons., *Henderson*	1943		142	142	3,050	1,203,405	2,851,955
Powells Lake, *Union*	1944		26	26	905	273,385	420,566
Pratt, *Webster*	1943		13	13	210	78,475	353,321
Raleigh, *Union*	1944		5	5	17	8,395	59,487
Reed, *Henderson*	1939		5	5	22	7,665	76,914
Reed, S., *Henderson*	1943		1	1			864
Robards, *Henderson*	1943		14	14	150	52,560	267,028
Robinsonville, *Union*	1946		3	3	8	4,745	4,745
Rock Springs, *Henderson*	1944		2	2	12	4,015	15,340
Sebree, *Webster*	1940		9	9	16	9,490	89,128
Smith Mills-Burbank Chapel, *Henderson*	1942		112	112	2,925	1,166,540	7,524,865
Spottsville, *Henderson*	1938		4	4	55	16,425	188,723
Spring Grove, *Union*	1941		10	10	55	27,740	180,635
Stanley, *Daviess*	1946		2	2	35	2,190	2,190
Sturgis, *Union*	1944		2	2	10	6,570	15,697
St. Raphael, *Daviess*	1944		1	1	3	730	3,656
Thruston, *Daviess*			2	2		392	26,364
Tilden, *Union*	1942			abn'd			565
Uniontown, *Union*	1942		224	224	5,160	2,039,985	7,522,628
Uniontown, E., *Union*	1945		2	2	5	5,110	9,125
Utley, *Union*	1943		7	7	135	52,925	225,600
Utley, N., *Union*	1944			abn'd			2,191
Wabash Island, *Union*	1943		1	1	3	1,825	5,477
Wathen, *Union*	1942		8	8	150	58,765	224,945
Waverly, *Union*	1945		41	41	620	250,025	377,775
Wilson, *Henderson*	1946		6	6	475	56,210	56,210
Zion, *Henderson*	1943		1	1	7	2,190	7,454
Wanamaker, *Webster*	1944		2	2	10	4,380	16,077
Total New Development		3	1,021	1,024	19,811	7,636,061	29,000,236
Old Development			13,600	13,600	8,875	3,367,855	186,341,926
Total Kentucky		3	14,621	14,624	28,686	11,003,916	215,342,162

Field, County	Year of Discovery	Oil Producing Wells at End of 1946			Oil Production (Barrels)		
		Flowing	Art. Lift	Total	Daily at End of 1946	Year 1946	Cumulative Through 1946
LOUISIANA							
Louisiana Summary—							
North Louisiana		820	3,757	4,577	99,309	32,942,345	709,138,855
South Louisiana		2,456	1,062	3,518	318,003	112,648,429	1,144,136,575
Total Louisiana		3,276	4,819	8,095	417,312	145,590,774	1,853,275,430
North Louisiana							
Ashland, *Natchitoches*	1946	4		4	140	31,025	31,206
Athens, *Claiborne*	1945	1		1	55	25,185	27,355
Beekman, *Morehouse*	1942						600
Bellevue, *Bossier*	1922		208	208	500	191,990	11,707,515
Benton, 10 gas-dist. wells shut in, *Bossier*	1944		9	9	75	63,510	176,375
Big Island, *Rapides*	1942		1	1	255	39,785	43,880
Caddo, *Caddo*	1906	9	1,409	1,418	5,300	1,897,270	173,425,970
Caddo Light				1,062	4,075	1,473,505	
Caddo Heavy	1906			356	1,225	423,765	
Carterville, Shallow, *Bossier-Webster*	1929		19	19	47	17,885	1,731,904
Carterville, N., *Bossier-Webster*	1943	6		6	130	48,910	258,850
Catahoula Lake, *La Salle*	1942	2	3	5	535	168,995	625,870
Choudrant, 1 gas-dist. well shut in, *Lincoln*	1946						
Converse, *Sabine*	1935		65	65	190	85,775	2,979,410
Cotton Valley, *Webster*	1924	46	112	158	5,970	2,670,705	52,251,415
Holloway sand	1936			36	605	222,650	6,685,781
Bodcaw sand	1938			4	165	60,955	3,694,037
Dist. and Rim Oil	1937			118	5,200	2,387,100	26,929,097
Glen Rose sand	1928						350,000
Blossom sand	1924						14,592,500
Cross Lake, *Caddo*	1938		51	51	1,025	415,005	7,847,850
Cypress Bayou, *LaSalle*	1941		1	1	45	9,490	162,325
Delhi-Big Creek, *Richland*	1945	258	33	291	25,900	6,359,395	7,489,490
DeSoto, Crichton, and Bull Bayou, *DeSoto-Red River*	1913	3	106	109	820	333,245	60,167,495
Elm Grove, *Bossier-Caddo*	1917		39	39	255	101,470	4,286,455
Elm Ridge, *LaSalle*	1942			abn'd			7,650
Haynesville, *Claiborne*	1921	151	195	346	8,075	2,935,695	90,895,580
Blossom sand	1921			186	1,925	709,925	75,689,305
Cotton Valley sand	1944			8	810	324,120	559,720
Pettit lime	1941			150	4,750	1,820,985	14,565,890
Smackover lime	1946			2	590	80,665	80,665
Haynesville, E., *Claiborne*	1945	9	5	14	1,365	374,490	380,625
Holly, *DeSoto*		6	36	42	1,450	501,145	2,213,825
Holly Ridge, *Tensas*	1943	30	5	35	3,410	1,251,220	3,537,370
Tuscaloosa sand	1943			34	3,340	1,227,495	3,443,125
Wilcox sand	1944			1	70	23,725	94,245
Homer, *Claiborne*	1919		311	311	2,490	943,525	76,369,750
Cotton Valley sand	1943						3,820
Homer Shallow	1919			311	2,490	943,525	76,365,930
Indian Bayou, *LaSalle*	1942	2		2	245	49,640	198,165
Jena, S., *LaSalle*	1941		5	5	120	48,180	437,356
Knowles, 3 gas-dist. wells shut in, *Lincoln*	1945				55	12,410	15,615
Lake St. John, *Concordia*	1942	73	32	105	14,550	4,355,910	7,242,500
Tuscaloosa sand	1944			84	13,715	4,070,845	5,936,820
Wilcox sand	1942			21	835	285,065	1,305,680
Lamar, 1 well shut in, *Franklin*	1946					2,555	2,555
Larto Lake, *Catahoula*	1941		1	1	90	23,360	152,430
Lisbon, *Claiborne-Lincoln*	1936	23	117	140	1,075	432,890	12,806,305
Lisbon Crude	1936	1	117	118	750	278,130	11,627,844
Lisbon Distillate	1939	22		22	325	154,760	1,178,461
Little Creek, *LaSalle*	1941	4	66	70	1,725	606,265	4,909,555
Longwood, *Caddo*	1945		6	6	85	39,055	72,355
Manifest, *Catahoula*	1942		1	1	12	5,110	15,175
Nebo, *LaSalle*	1940	29	119	148	7,375	2,706,475	16,869,114
Olla, *LaSalle*	1940	8	174	182	6,265	2,438,200	22,015,315
Olla, S., *LaSalle*	1941		11	11	185	73,730	645,730
Plain Dealing, *Bossier*	1944		2	2	100	6,205	6,205
Pleasant Hill, *Sabine*	1927		19	19	25	12,775	1,715,440
Rodessa, *Caddo*	1935	128	180	308	4,950	2,024,655	88,284,515
Sailes, 3 wells shut in, *Bienville*	1945					2,555	19,820
Sarepta, 1 well shut in, *Bossier-Webster*	1922					3,650	1,782,440
Shongaloo, 2 wells shut in, *Webster*	1929						277,226
Shongaloo, N., *Webster*	1945	3	4	7	385	121,910	129,365
Sligo, *Bossier*	1936	17	67	84	1,025	370,475	5,113,160
Sugar Creek, *Claiborne*	1941	2	36	38	710	262,800	2,847,140
Tremont, 2 wells shut in, *Lincoln*	1945					730	7,305
Trout Creek, *LaSalle*	1941		7	7	85	31,755	256,420
Urania, *Grant-LaSalle-Winn*	1925		268	268	1,680	600,790	29,399,660
White Sulphur Springs, *LaSalle*	1927			abn'd			12,290
Willow Lake, *Catahoula*	1941	2		2	215	92,345	470,935
Zwolle, *Sabine*	1928	4	34	38	320	152,205	16,816,190
Total North Louisiana		820	3,757	4,577	99,309	32,942,345	709,138,855
South Louisiana							
Abbeville, *Vermilion*	1937	9		9	299	119,064	1,184,877
Alliance, *Plaquemines*	1946	1		1	8	744	744
Anse La Butte, *St. Martin*	1904	58	13	71	6,700	2,441,382	14,967,677

It Takes a Rugged Engine for the Tough Jobs



● This rugged Chrysler Industrial 12 Engine powers the husky shovel, shown below digging in for a big bite of anthracite coal.



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Crane Loaders	Portable Well Drillers
Farm Tractors	Road Rollers
Fire Pumps	Self-propelled Farm Combines
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Field, County	Year of Discovery	Oil Producing Wells at End of 1946			Oil Production (Barrels)		
		Flowing	Art. Lift	Total	Daily at End of 1946	Year 1946	Cumulative Through 1946
SOUTH LOUISIANA—Cont.							
Anse La Butte—Shallow		57	11	68	6,425	2,339,101	14,592,285
Anse La Butte—Deep		1	2	3	275	102,281	375,392
Arnaudville, *St. Martin*	1944						15,434
Avery Island, *Iberville*	1942	16	1	17	3,600	1,225,232	2,942,531
Bancroft, *Beauregard*	1938	4	12	16	475	198,176	3,903,008
Barataria, *Jefferson*	1939	24		24	3,950	1,498,960	7,668,651
Bastian Bay, *Plaquemines*	1941	7		7	775	308,375	568,097
Bateman Lake, *St. Mary*	1937	4		4	150	81,238	1,490,651
Bay Baptiste, (S. Lirette), *Terrebonne*	1938	1		1	37	14,986	25,029
Bay De Chene, *Jefferson*	1942	1		1	200	72,660	307,613
Bay St. Elaine, *Terrebonne*	1937	9	4	13	900	373,342	1,695,543
Bayou Blue, *Iberville*	1929	25	8	33	1,800	676,667	4,467,622
Bayou Bouillon, *St. Martin*	1916					572	570,407
Bayou Carlin, *St. Mary*	1945	3		3	350	132,040	162,502
Bayou Choctaw, *Iberville*	1931	1	10	11	250	109,867	4,411,569
Bayou Choupique, *Calcasieu*	1946	1		1	200	18,658	18,658
Bayou Couba, *St. Charles*	1942	3		3	475	187,194	669,661
Bayou De Fleur, *Jefferson*	1946	5		5	875	181,343	181,343
Bayou des Allemands, *St. Charles*	1937	5	5	10	386	132,203	1,559,863
Bayou des Glaise—New, *Iberville*	1944	5		5	750	243,650	496,740
Bayou des Glaise—Old, *Iberville*	1940						4,567
Bayou Mallet, *Acadia*	1936	10		10	821	206,364	1,017,694
Bayou Mallet, S., *Acadia*	1945	1		1	45	14,908	31,953
Bayou Penchant, *Terrebonne*	1945	1		1	65	17,710	37,831
Bayou Perot, *Jefferson*	1945	6		6	1,200	321,942	363,721
Bayou Pigeon, *Iberia*	1940	3		3	450	135,877	1,091,226
Bayou Sale, *St. Mary*	1941	60		60	9,950	3,502,230	12,505,615
Bear, *Beauregard*	1943	6		6	550	208,327	751,880
Bear Head Creek, *Beauregard*	1946	2		2	90	14,741	14,741
Belle Isle, *St. Mary*	1941	3	2	5	63	41,199	127,381
Big Island—5000 ft., *Rapides*	1942			abn'd			3,449
Big Island—9680 ft., *Rapides*		1		1		33,184	33,184
Big Lake, *Cameron*	1936	2		2	33	13,979	136,610
Black Bayou, *Cameron*	1929	16	7	23	2,100	723,338	13,341,676
Bon Air, *Jefferson Davis*	1945	4		4	700	174,742	175,304
Bosco, *Acadia-St. Landry*	1934	36	8	44	2,952	1,077,166	27,540,373
Branch, *Acadia*	1942	6		6	598	127,058	280,541
Bully Camp, *La Fourche*	1944	4		4	700	252,050	666,852
Caillou Island, *Terrebonne*	1930	46	8	54	6,650	2,077,869	40,369,186
Cameron Meadows, *Cameron*	1931	7	17	24	850	333,788	11,054,184
Cankton, *St. Landry*	1937			abn'd			47,780
Cankton, N., *St. Landry*	1944	9		9	1,200	470,261	1,037,266
Chacahoula, *La Fourche*	1938	26		26	1,840	679,054	5,277,179
Chalkey, *Cameron*	1938	22	2	24	1,953	752,340	8,908,564
Charenton, *St. Mary*	1936	23	87	110	4,000	1,181,356	14,156,292
Cheneyville, *Rapides*	1935	3	14	17	675	251,892	5,966,024
China, *Jefferson Davis*	1940	1		1	11	2,497	10,269
College Point, *St. James*	1944	4		4	261	113,286	160,719
Creole, *Cameron*	1938	7		7	350	133,259	2,657,733
Crowley, *Acadia*	1945	2		2	250	86,929	125,129
Crowley, N., *Acadia*	1937	38	2	40	3,927	1,521,821	13,122,507
Crowlet, S., *Acadia*	1938			abn'd		236	142,616
Darrow, *Ascension*	1932	3	2	5	550	262,513	7,096,199
Deer Island, *Terrebonne*	1944			abn'd			443
Delacroix Island, *Plaquemines*	1941	7		7	850	341,216	1,015,589
De Large (Dulac), *Terrebonne*	1938	3		3	362	138,584	953,816
Delta Duck Club, *Plaquemines*	1941	10		10	800	369,037	811,431
Delta Farms, *La Fourche*	1940	63		63	13,800	4,481,090	11,600,916
Dog Lake, Bayou, *Terrebonne*	1929	9	4	13	1,602	597,892	4,671,611
Edgerly, *Calcasieu*	1913	4	4	8	325	116,968	9,193,811
Egan, *Acadia*	1943	31	1	32	4,408	1,460,192	1,936,240
Elton, N., *Allen*	1939	3		3	73	26,316	157,585
Elton, S., *Jefferson Davis*	1937	4		4	105	46,472	198,055
Eola, *Avoyelles*	1939	22	54	76	4,273	1,692,356	22,366,692
Erath, *Vermilion*	1940	29	2	31	3,300	1,213,231	3,392,462
Fausse Point, *Iberia*	1927	11	1	12	1,226	454,120	1,436,429
Fields, *Beauregard*	1943	4	3	7	369	172,164	310,655
Flatwoods, *Rapides*	1945						490
Four Isle, *Terrebonne*	1934			abn'd			291,433
Fresh Water Bayou, *Vermilion*	1944	2		2	34	5,953	10,814
Garden Island Bay, *Plaquemines*	1935	35	6	41	3,750	1,198,089	10,989,002
Gibson, *Terrebonne*	1937	28	2	30	2,942	1,275,017	13,268,981
Gibson, E., *Terrebonne*	1943	3		3	68	16,185	30,277
Gibson, N.E., *Terrebonne*	1941	15	2	17	3,560	1,257,007	5,300,899
Gillis-English Bayou, *Calcasieu*	1934	3	16	19	448	184,259	23,263,613
Golden Meadows, *La Fourche*	1938	53	90	143	7,531	2,434,478	25,435,597
Good Hope, *St. Charles*	1944	26		26	5,250	1,736,968	2,535,193
Gordon, *Beauregard*	1944	3		3	94	17,416	22,974
Grand Bay (Bird Island), *Plaquemines*	1938	47		47	8,550	3,094,399	17,116,830
Grand Lake, *Cameron*	1939	20		20	1,850	664,076	7,571,030
Gueydan, *Vermilion*	1932	20	8	28	4,503	1,707,905	8,959,011
Gueydan, W., *Vermilion*	1945	18	2	20	1,150	517,493	2,155,173
Gum Cove Prospect, *Cameron*	1944	2		2	65	34,793	135,779
Hackberry, E., *Cameron*	1927	30	28	58	4,000	1,649,445	34,796,116
Hackberry, W., *Cameron*	1928	49	29	78	6,057	2,155,485	20,668,012
Hahnville Prospect, *St. Charles*	1946	1		1		3,420	3,420
Happytown, *St. Martin*	1939	2		2	150	53,692	773,883
Hayes, *Calcasieu*	1942	1		1	43	11,919	33,351
Hester, (Convent), *St. James*	1943	4		4	80	45,636	130,088
Hester, 11,000-ft. sd., *St. James*	1945						12,911

Field, County	Year of Discovery	Oil Producing Wells at End of 1946			Oil Production (Barrels)		
		Flowing	Art. Lift	Total	Daily at End of 1946	Year 1946	Cumulative Through 1946
SOUTH LOUISIANA—Cont.							
Hope Villa, E., *Baton Rouge*	1943	1		1	40	8,112	29,749
Horse Shoe Bayou, *St. Mary*	1937	13		13	1,400	406,270	3,461,842
Houma, N., *Terrebonne*	1945						258
Houma, S., *Terrebonne*	1938	2		2	154	60,222	800,352
Iberia, *Iberia*	1917	42	25	67	4,375	1,741,651	36,053,386
Indian Village, *Jefferson Davis*	1944	1		1	100	36,035	79,208
Iota, *Acadia*	1945			abn'd		2,068	21,771
Iowa, *Calcasieu-Jefferson Davis*	1931	51	17	68	7,303	2,489,018	60,038,459
Jeanerette, *St. Mary*	1935	10	4	14	857	266,239	12,077,203
Jeanerette, N., *St. Mary*	1943	4		4	247	131,696	298,379
Jeanerette, S., *St. Mary*	1945	1		1	200	72,805	101,466
Jefferson Island, *Iberia*	1938	4	5	9	300	157,908	1,945,437
Jennings, Deep & Shallow, *Acadia*	1902	25	58	83	5,202	2,023,613	96,468,201
Jennings—Deep		25	34	59	4,952	1,906,844	43,442,717
Jennings—Shallow			24	24	250	116,769	53,025,484
Jennings, S., *Jefferson Davis*	1936						144,911
Kennilworth (Reggio-Shell Beach), *St. Bernard*	1939	1		1	9	3,683	143,188
Krotz Springs, *St. Landry*	1943	5		5	101	35,896	162,844
La Fitte, *Jefferson*	1935	57	6	63	12,600	4,373,802	48,286,348
La Fourche Crossing, *La Fourche*	1939	6		6	195	97,114	1,092,338
Lake Arthur, *Jefferson Davis*	1937	10	2	12	1,181	378,125	2,512,315
Lake Barre, *Terrebonne*	1929	6	17	23	482	181,759	18,606,353
Lake Charles, S., *Calcasieu*	1944			abn'd			9,938
Lake Chicot, *St. Martin*	1941	17		17	3,400	885,411	3,245,427
Lake de Cade, *Terrebonne*	1942	1		1	25	10,591	76,748
Lake Hermitage, *Plaquemines*	1934	1	1	2	20	54,231	216,039
Lake Long, *La Fourche*	1937	15	2	17	1,357	517,073	5,211,347
Lake Mongoulois, *St. Martin*	1939	3		3	700	225,811	493,618
Lake Pelto, *Terrebonne*	1929	19	4	23	4,000	1,297,730	5,919,254
Lake Salvador, *St. Charles*	1940	26		26	4,650	1,633,569	7,172,971
Lakeside, *Cameron*	1941	5		5	249	78,453	188,484
Lake Verret, W., *St. Martin*	1938	20	14	34	3,200	1,129,428	5,819,004
Lake Washington, *Plaquemines*	1931	7		7	500	176,969	3,846,888
Lapeyrouse, *Terrebonne*	1941	1		1	8	2,039	3,143
La Pice, *St. James*	1939	18	5	23	2,406	810,018	2,261,197
La Place, *St. John*	1939	5		5	268	129,616	560,052
Laurel Ridge, *Iberville*	1944	2		2	68	6,271	10,996
Leeville, *La Fourche*	1931	28	46	74	3,914	1,426,207	30,218,616
Lewisburg, *Acadia*	1941	3		3	45	19,135	142,791
Lewisburg, S., *Acadia*	1943	3		3	27	15,218	53,628
Lirette, *Terrebonne*	1937	11		11	636	229,783	1,109,179
Little Chenier, *Cameron*	1940			abn'd			12,057
Little Temple, *La Fourche*	1946					2,462	2,462
Lockport, *Calcasieu*	1924	10	10	20	775	286,989	17,159,332
Mamou, *Evangeline*	1945	6		6	1,600	251,540	252,122
Mermentau, W., *Jefferson Davis*	1940	2		2	80	30,012	197,272
Moss Lake, E., *Calcasieu*	1944	5		5	186	65,279	106,707
Mud Lake, *Cameron*	1945	1		1		3,694	5,078
Napoleonville, *Assumption*	1943	6	1	7	533	212,092	353,622
Neale, *Beauregard*	1940	40	10	50	3,400	1,499,773	9,526,745
Nibletts, *Jefferson Davis*	1940			abn'd			5,389
Oberlin, S., *Allen*	1946	1		1	20	7,886	7,886
Oretta, *Beauregard*	1945	5		5	300	77,936	144,253
Oretta, N., *Beauregard*	1946	1		1	20	7,659	7,659
Paradis, *St. Charles*	1939	68		68	10,000	3,690,969	19,222,788
Pecan Island, *Vermilion*	1943	5		5	73	23,132	26,119
Pecan Lake, *Cameron*	1941			abn'd			9,906
Perkins, *Calcasieu*	1943	1		1	13	5,455	34,457
Pine Grove, *Beauregard*	1945					311	1,547
Pine Prairie, Deep, *Evangeline*	1941	53	7	60	5,000	1,831,161	8,263,696
Pine Prairie, Shallow, *Evangeline*	1912			abn'd			20,000
Plumb Bob (Henderson), *St. Martin*	1939	4	2	6	700	195,893	763,269
Pointe Au Fer, *Terrebonne*	1941			abn'd			202
Port Allen, W., *Baton Rouge*	1941	4		4	275	86,101	725,016
Port Barre, *St. Landry*	1929	25	29	54	2,900	1,070,449	15,486,985
Potash, *Plaquemines*	1937	14	6	20	1,000	450,475	3,862,392
Potash—5,600-ft.			1	1	25	20,883	20,883
Potash, Deep—8,000-ft.	1939	14	4	18	960	422,115	3,797,994
Potash—10,875-ft.	1945					1,308	33,469
Potash, Shallow—1,800-ft, New	1938		1	1	15	5,915	9,368
Potash, Shallow—1,800-ft., Old							633
Potash—4,100-ft.						254	254
Quarantine Bay, *Plaquemines*	1937	45		45	8,775	3,207,586	18,793,507
Queen Bess	1946	1		1	11	250,181	250,181
Rabbit Island, *Iberia*	1943			abn'd			331
Raceland, *La Fourche*	1938	12	1	13	1,525	548,360	5,021,032
Reddell, *Evangeline*	1943	10		10	295	115,416	239,434
Reserve, *St. John*	1945	1		1	115	49,243	121,651
Ritchie, *Acadia*	1940	4	16	20	1,075	408,737	1,515,871
Ritchie, N., *Acadia*	1943	9		9	658	211,684	409,078
Roanoke, *Jefferson Davis*	1934	17	10	27	2,442	924,311	13,035,019
Rosedale, *Iberville*	1943	4		4	375	149,083	382,155
Sec. 28 Dome, *St. Martin*	1941	5		5	800	248,312	608,548
Shuteston, *St. Landry*	1943	7		7	552	165,896	335,499
Singer, *Beauregard*	1946	2		2	175	49,180	49,180
Sorrento, *Ascension*	1928	6		6	50	19,636	1,359,712
St. Gabriel, *Iberville*	1941	30		30	4,818	1,742,131	9,228,781
St. James, *St. James*	1943						153,274

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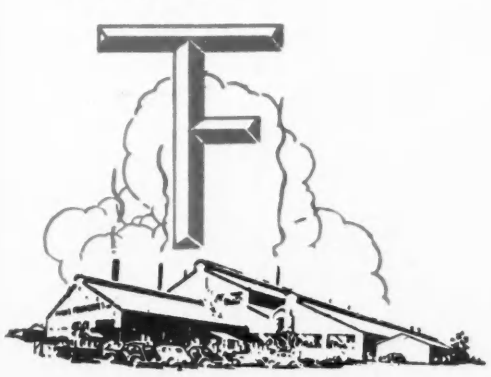

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Organized for Service

LUFKIN, TEXAS

Field, County	Year of Discovery	Oil Producing Wells at End of 1946			Oil Production (Barrels)		
		Flowing	Art. Lift	Total	Daily at End of 1946	Year 1946	Cumulative Through 1946
SOUTH LOUISIANA—Cont.							
St. Martinsville, *St. Martin*	1935	10	.....	10	290	136,166	1,616,453
St. Martinsville, N.,	1945	8	.....	8	165	83,051	106,371
St. Martinsville, S.	.....	2	.....	2	125	53,115	1,510,082
Starks, *Calcasieu*	1927	2	20	22	200	96,618	4,073,772
Stella, *Plaquemines*	1940	7	.....	7	636	222,029	1,277,722
Sulphur, *Calcasieu*	1926	4	59	63	2,300	730,281	19,683,847
Sweet Lake, *Cameron*	1927	14	3	17	1,400	550,067	8,631,669
Tepetate, *Acadia*	1935	17	30	47	1,936	597,651	14,342,434
Tepetate, N., *Acadia*	1938	22	.....	22	1,657	488,759	1,095,217
Tepetate, W., *Jefferson Davis*	1944	31	.....	31	4,715	1,814,331	2,846,126
Thornwell, S., *Jefferson Davis*	1942	3	.....	3	110	35,153	70,425
Timbalier Bay, *La Fourche*	1938	.....	2	2	75	24,504	334,720
University, E., *Baton Rouge*	1938	30	31	61	5,500	1,893,715	21,133,187
Unknown Pass, *Orleans*	1941	.....	.....	abn'd	.....	.....	12,635
Vacherie (Hester), *St. James*	1938	6	1	7	444	175,613	502,778
Valentine, *La Fourche*	1938	2	10	12	600	180,376	6,103,499
Venice, *Plaquemines*	1937	43	.....	43	9,300	3,017,175	16,313,627
Vermilion Bay, *Iberia*	1939	1	.....	1	145	27,966	671,617
Villa Platte, *Evangeline*	1937	158	85	243	7,308	2,603,389	34,579,085
Vinton, *Calcasieu*	1910	68	45	113	10,000	3,368,336	53,112,562
Weeks Island, *Iberia*	1945	2	.....	2	820	214,106	228,040
Welsh, *Jefferson Davis*	1903	2	7	9	40	14,323	751,225
West Bay, *Plaquemines*	1940	23	.....	23	3,500	1,238,065	5,552,735
West Cote Blanche Bay, *St. Mary*	1940	15	5	20	2,900	984,820	4,121,816
Westwego, *Jefferson*	1941	3	.....	3	145	56,880	488,602
White Castle, *Iberville*	1929	21	9	30	2,450	1,009,909	11,122,012
White Lake, W., *Vermilion*	1944	3	.....	3	250	81,063	138,496
White Lake, E., *Vermilion*	1940	25	1	26	3,852	1,429,456	4,552,992
Woodlawn, *Jefferson Davis*	1938	20	1	21	2,038	733,543	7,080,682
Total South Louisiana	.....	2,456	1,062	3,518	318,003	112,648,429	1,144,136,575
MICHIGAN							
Adams, *Arenac*	1937	36	30	66	3,600	1,320,338	7,272,973
Akron, *Tuscola*	1938	.....	6	6	51	19,967	239,954
Allegan, *Allegan*	1938	.....	1	1	3	693	1,511
Arbela, *Tuscola*	1946	1	3	4	50	3,944	3,944
Ashton, *Osceola*	1945	1	2	3	265	46,974	61,238
Bangor, *Van Buren*	1939	.....	15	15	47	20,029	563,953
Bangor, N., *Van Buren*	1942	.....	4	4	19	21,239	302,040
Beaverton, *Gladwin*	1934	.....	13	13	134	19,990	727,650
Beaverton, S., *Gladwin*	1936	.....	22	22	180	58,860	661,967
Beaverton, W., *Gladwin*	1944	.....	1	1	4	1,247	4,711
Belly Achers, *Montcalm*	1944	.....	4	4	128	47,372	156,512
Bently, *Gladwin*	1937	.....	39	39	201	78,150	1,070,138
Birch Run, 1 well shut in, *Saginaw*	1934	.....	.....	.....	.....	.....	214,958
Bloomer, *Montcalm*	1936	.....	.....	abn'd	.....	.....	814
Bloomer, *Montcalm*	1944	2	10	12	550	195,883	427,490
Bloomingdale, *Van Buren*	1938	.....	58	58	130	59,750	6,130,511
Bloomfield, *Huron*	1940	.....	.....	abn'd	.....	.....	71
Blue Lake, *Muskegon*	1941	.....	.....	abn'd	.....	.....	26
Breedsville, *Van Buren*	1943	.....	17	17	68	36,445	239,241
Brenner, *Allegan*	1946	6	8	14	390	114,224	114,224
Bloomfield, *Isabella*	1934	.....	.....	abn'd	.....	.....	541
Buckeye, N., *Gladwin*	1937	.....	149	149	594	215,475	15,845,135
Buckeye, S., *Gladwin*	1936	.....	70	70	201	74,367	4,119,443
Bushnell, *Montcalm*	1936	.....	.....	abn'd	.....	.....	4,035
Casco, *Allegan*	1940	.....	6	6	7	4,719	9,918
Cass, *Cass*	1930	.....	.....	abn'd	.....	.....	1,491
Cato, *Montcalm*	1944	.....	3	3	51	15,257	18,156
Cedar, *Osceola*	1943	.....	9	9	181	64,205	475,581
Chase, 1 well shut in, *Lake*	1943	.....	.....	.....	.....	463	2,065
Clare City, *Clare*	1938	.....	3	3	10	4,142	37,469
Clayton, *Arenac*	1936	3	39	42	460	145,197	4,309,700
Coffee Lake, *Van Buren*	1946	.....	5	5	71	13,027	13,027
Coldwater, *Isabella*	1944	61	12	73	4,603	1,396,847	2,423,194
Columbia, *Van Buren*	1938	.....	34	34	171	42,046	2,157,144
Cranberry Lake, *Clare*	1943	.....	1	1	19	4,711	17,689
Crystal, *Montcalm*	1935	.....	15	15	97	32,390	7,369,522
Crystal, *Oceana*	1941	.....	1	1	.....	630	1,497
Currie, *Isabella*	1936	2	.....	2	6	2,642	167,538
Dallas, 2 wells shut in, *Clinton*	1942	.....	.....	.....	.....	.....	2,817
Dalton, *Muskegon*	1940	.....	11	11	48	13,201	45,130
Day, *Montcalm*	1946	.....	1	1	9	2,091	2,091
Decatur, *Van Buren*	.....	.....	.....	abn'd	.....	.....	38
Deep River, *Arenac*	1944	97	3	100	8,000	2,409,675	4,605,214
Deerfield, *Monroe*	1935	.....	17	17	51	22,768	440,093
Diamond Springs, *Allegan*	1938	.....	22	22	49	18,179	849,002
Dorr, *Allegan*	1938	.....	15	15	63	18,876	332,400
Douglass, *Montcalm*	1945	.....	7	7	215	88,869	105,996
Dumont Lake, *Allegan*	1945	.....	1	1	.....	172	319
Dwight, *Huron*	1945	.....	1	1	3	2,853	3,893
Edenville, *Midland*	1938	.....	22	22	58	22,826	1,249,074
Edmore, *Montcalm*	1933	.....	5	5	18	9,337	468,265
Edwardsburg, *Cass*	1941	.....	.....	abn'd	.....	.....	38
Elba, *Gratiot*	1945	.....	4	4	59	20,569	20,721
Elkland, 1 well shut in, *Tuscola*	1946	.....	.....	.....	.....	1,272	1,272
Elmwood, *Tuscola*	1945	.....	.....	.....	.....	.....	450
Enterprise, *Missaukee*	1943	2	1	3	27	11,127	34,148
Essexville, *Bay*	1944	.....	34	34	909	336,493	778,763
Evart, *Osceola*	1942	.....	26	26	770	313,320	2,715,730
Fillmore, *Allegan*	1943	.....	57	57	285	124,865	590,480
Fork, *Mecosta*	1942	.....	61	61	3,226	1,376,642	5,235,872
Foster, *Ogemaw*	.....	.....	.....	abn'd	.....	.....	418
Freeman, *Clare*	1938	.....	22	22	174	58,574	3,636,341

Field, County	Year of Discovery	Oil Producing Wells at End of 1946			Oil Production (Barrels)		
		Flowing	Art. Lift	Total	Daily at End of 1946	Year 1946	Cumulative Through 1946
MICHIGAN—Continued							
Fremont, *Isabella*	1938	.....	.....	abn'd	.....	.....	2,771
Fremont, *Saginaw*	1937	.....	.....	abn'd	.....	.....	1,601
Garfield, distillate, *Clare*	1946	1	.....	1	77	8,821	8,821
Gaines, *Kent*	1945	.....	.....	.....	.....	.....	47
Geneva, *Midland*	1935	.....	.....	abn'd	.....	.....	60,998
Geneva, *Van Buren*	1940	.....	7	7	22	13,880	48,517
Gibson, *Bay*	1936	.....	.....	abn'd	.....	.....	3,573
Goodwell, *Newaygo*	1943	.....	12	12	202	102,191	933,986
Grout, *Gladwin*	1940	.....	3	3	7	3,407	32,599
Hamilton, *Clare*	1940	.....	.....	abn'd	.....	.....	10,344
Hamilton, N., *Clare*	1943	.....	1	1	8	2,692	10,495
Harrison, *Clare*	1945	.....	2	2	43	17,684	23,188
Hart, *Oceana*	1932	.....	.....	abn'd	.....	.....	116,273
Hatton, *Clare*	1941	.....	2	2	27	11,286	130,115
Hawkhead, *Allegan*	1946	.....	14	14	165	41,754	41,754
Headquarters, *Roscommon*	1941	.....	39	39	520	231,886	6,539,228
Heath, 1 well shut in, *Allegan*	1945	.....	.....	.....	.....	165	589
Hilliards, *Allegan*	1944	.....	10	10	22	11,118	89,885
Holland, *Ottawa*	1940	.....	.....	abn'd	.....	.....	14,689
Hope, *Barry*	1940	.....	11	11	43	15,920	40,914
Hopkins, *Allegan*	1939	.....	3	3	11	3,267	132,444
Hopkins, W., *Allegan*	1941	.....	.....	.....	.....	.....	382,472
Huron, 1 well shut in, *Wayne*	1943	.....	.....	.....	.....	228	1,765
Jonesfield, *Saginaw*	1943	.....	.....	abn'd	.....	.....	63
Kawkawlin, *Bay*	1938	.....	147	147	1,945	704,446	3,490,668
Lacota, *Van Buren*	1946	.....	6	6	35	28,301	28,301
Lakefield, *Saginaw*	1937	.....	1	1	3	850	9,342
Larkin, *Midland*	1935	.....	.....	abn'd	.....	.....	7,070
Leaton, *Isabella*	1929	.....	44	44	307	105,030	3,409,682
Lee, *Allegan*	1941	.....	.....	abn'd	.....	.....	1,903
Lincoln, *Midland*	1939	.....	.....	abn'd	.....	.....	71
Marne, *Ottawa*	1940	.....	.....	.....	.....	33	4,606
Mill Lake, *Van Buren*	1938	.....	11	11	24	6,046	479,638
Mio, *Oscoda*	1946	1	.....	1	4	1,980	1,980
Monterey, *Allegan*	1938	.....	18	18	32	13,400	436,362
Monterey, E., *Allegan*	1945	.....	1	1	.....	738	9,420
Monterey, S., *Allegan*	1944	.....	12	12	230	73,367	156,629
Monterey, Sec. 24, *Allegan*	1938	.....	.....	abn'd	.....	.....	176
Mt. *Forest, Bay*	1946	.....	.....	.....	.....	332	332
Mount Haley, *Midland*	1935	.....	1	1	.....	1,125	35,305
Mount Pleasant & East Ext., *Isabella, Midland*	1928	.....	168	168	697	241,271	22,961,508
Muskegon, *Muskegon*	1927	.....	35	35	47	15,857	6,794,218
Muskrat Lake, *Van Buren*	1941	.....	23	23	56	47,711	357,243
New Salem, *Allegan*	1938	.....	63	63	309	123,342	3,957,871
Niles, *Berrien*	1940	.....	.....	abn'd	.....	.....	228
Norwich, E., *Missaukee*	1942	42	4	46	1,130	446,303	1,086,758
Oshtemo, *Kalamazoo*	1944	.....	.....	abn'd	.....	.....	50
Otisville, *Genesee*	1941	.....	5	5	8	1,805	7,951
Otsego, *Allegan*	1938	.....	.....	abn'd	.....	.....	2,246
Overisel, Sec. 11, *Allegan*	1940	.....	.....	abn'd	.....	.....	6,370
Overisel, *Allegan*	1938	.....	68	68	160	53,408	2,384,609
Pinconning, *Bay*	1944	1	.....	1	100	40,276	88,534
Pine, *Montcalm*	1938	.....	1	1	10	4,655	53,743
Pine River, *Gratiot*	1942	.....	2	2	2	759	10,808
Polkton, *Ottawa*	1942	.....	4	4	5	2,120	6,458
Porter, *Midland*	1931	.....	227	227	1,226	465,228	34,919,297
Porter, *Van Buren*	1939	.....	.....	abn'd	.....	.....	3,721
Prosper, *Missaukee*	1942	.....	12	12	308	112,674	892,758
Redding, *Clare*	1939	.....	66	66	510	197,477	10,869,712
Reed City, *Osceola*	1940	66	125	191	8,047	3,281,099	32,448,234
Richfield, *Roscommon*	1941	7	9	16	160	58,590	338,062
Richland, *Saginaw*	1935	.....	.....	abn'd	.....	.....	1,871
Riverside, *Missaukee*	1942	.....	1	1	11	3,466	41,157
Rockford, *Kent*	1945	.....	10	10	325	102,190	114,590
Rose City, *Ogemaw*	1943	4	6	10	105	38,985	105,580
Rose Lake, *Osceola*	1943	5	10	15	400	156,692	894,346
Saginaw, *Saginaw*	1925	.....	42	42	45	16,658	1,464,798
Salem, *Allegan*	1937	.....	110	110	210	65,777	3,257,569
Sauble, *Lake*	1942	.....	4	4	23	8,937	79,821
Secord, *Gladwin*	1937	.....	.....	abn'd	.....	.....	12,024
Sec. 10-17n-16w, *Mason*	1934	.....	.....	abn'd	.....	.....	228
Sec. 18-Sherman, *Isabella*	1940	.....	.....	abn'd	.....	.....	975
Sherman, *Isabella*	1936	.....	32	32	148	62,813	4,394,627
Sherman, W., *Isabella*	1944	.....	.....	abn'd	.....	.....	178
Skells, *Clare*	1942	.....	.....	abn'd	.....	.....	1,495
Stoney Lake, *Oceana*	1946	1	.....	1	120	6,000	6,000
Sumpter, *Wayne*	1942	.....	.....	abn'd	.....	.....	221
Tallmadge, S., *Ottawa*	1939	.....	36	36	126	47,067	503,065
Tallmadge, (Sec. 5), *Ottawa*	1940	.....	.....	abn'd	.....	.....	1,647
Trowbridge, *Allegan*	1938	.....	12	12	23	9,131	216,413
Unnamed, *Gratiot*	1929	.....	.....	abn'd	.....	.....	228
Unnamed, *Shiawassee*	1930	.....	.....	abn'd	.....	.....	236
Vernon, *Isabella*	1930	.....	21	21	.....	52,238	4,657,311
Walker, *Kent-Ottawa*	1938	.....	376	376	703	264,981	10,378,633
Wayland, *Allegan*	1944	.....	2	2	10	1,355	3,556
West Branch, *Ogemaw*	1933	.....	218	218	118	202,330	5,904,794
Wheatland, *Mecosta*	1945	1	.....	1	135	29,261	32,530
Winfield, *Montcalm*	1936	.....	4	4	7	1,786	57,835
Winterfield, *Clare*	1940	.....	33	33	501	173,912	3,825,894
Wise, *Isabella*	1938	.....	64	64	610	205,779	2,532,899
Wisner, *Tuscola*	1936	.....	.....	abn'd	.....	.....	543
Woodville, *Newaygo*	1943	.....	7	7	66	27,874	188,279
Wyoming Park, *Kent*	1939	.....	11	11	17	6,382	134,920
Yost-Jasper, *Midland*	1932	.....	81	81	590	187,115	7,748,244
Zeeland, *Ottawa*	1939	.....	8	8	48	22,903	233,808
Total Michigan	.....	340	3,135	3,475	47,098	17,099,097	256,970,841

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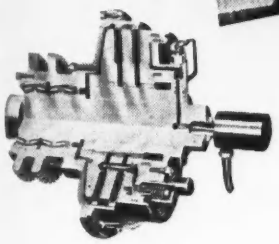
Houston, Texas

Field, County	Year of Discovery	Oil Producing Wells at End of 1946			Oil Production (Barrels)		
		Flowing	Art. Lift	Total	Daily at End of 1946	Year 1946	Cumulative Through 1946
MISSISSIPPI							
Baxterville, *Lamar*		45	1	46	8,061	1,243,751	1,302,162
Upper Tuscaloosa	1945	9		9	61	12,094	
Lower Tuscaloosa	1944	36	1	37	8,000	1,231,657	
Brookhaven, *Lincoln*	1943	24	3	27	10,500	1,146,156	1,207,301
Carthage Point, *Adams*	1945	3		3	450	90,534	136,332
Cary, *Sharkey*	1941			abn'd		6,776	57,930
Cranfield, 1 well shut in, *Adams*		73		73	14,679	4,462,505	7,099,176
Paluxy, 1 well shut in	1943						
Lower Tuscaloosa	1944	57		57	12,800	3,848,505	
Wilcox sand		16		16	1,879	614,000	
Eucutta, *Wayne*	1943	6	101	107	6,805	2,408,971	4,949,930
Fayette, *Jefferson*	1945	7	1	8	515	129,993	152,774
Flora, *Madison*	1943		4	4	8	18,796	44,468
Gwinville, *Jeff Davis*		20		20	336	148,216	269,972
Eutaw & Upper Tuscaloosa (Condensate)	1944	15		15	13	1,629	
Upper Tuscaloosa, Oil	1944	4		4	317	138,916	
Lower Tuscaloosa	1944	1		1	6	7,671	
Heidelberg, *Jasper*		22	104	126	13,569	4,104,403	8,438,772
Heidelberg, East	1944	21	70	91	10,026	3,037,972	
Heidelberg, W., *Eutaw*	1944	1	32	33	3,395	1,015,614	
Heidelberg, W., Tuscaloosa	1946		2	2	148	50,817	
Hub, 1 well shut in, *Marion*		7		7	421	97,153	116,132
Eutaw, 1 well shut in	1945					42	
Lower Tuscaloosa, Oil	1945	5		5	403	88,086	
Lower Tuscaloosa, Condensate	1945	1		1		6,871	
Comanche zone	1946	1		1	18	2,154	
Jackson (Gas), 16 wells now, *Hinds-Rankin*	1930						
La Grange, *Adams*	1946	6		6	180	18,342	18,342
Langsdale, Clarke	1945		21	21	1,141	369,927	449,924
Mallalieu, *Lincoln*	1944	5		5	1,415	171,973	322,339
Pickens, *Madison-Yazoo*	1940		45	45	4,860	1,790,816	8,414,041
Quitman, 1 well no report, *Clarke*	1945						
SoSo, 2 wells shut in, *Jasper*	1945					698	3,551
Tinsley, *Yazoo*	1939		288	288	20,921	8,052,928	94,301,455
Total Mississippi		218	568	786	83,861	24,261,938	127,284,601
MISSOURI							
Total Missouri			38	38	135	52,000	390,000
MONTANA							
(Data from Oil Conservation Board of Montana, Great Falls, Mont.; partly estimated)							
Bannatyne, *Teton*	1927			abn'd			55,245
Border, *Toole*	1930		12	12	45	18,034	916,868
Cat Creek, 33 wells shut in, *Petroleum and Garfield*	1920	2	115	117	1,350	472,393	15,597,424
Cedar Creek Anticline, *Fallon*	1936			abn'd			28,141
Clark's Fork, 1 well shut in, *Carbon*	1944						9,136
Cut Bank, 44 wells shut in. *Glacier and Pondera*	1931	8	1,002	1,010	12,300	4,588,333	51,811,450
Devil's Basin, 3 wells shut in, *Musselshell*	1919						20,422
Devon, *Toole*	1943		3	3	10	3,293	8,412
Dry Creek, 1 well shut in, *Carbon*	1930	1	6	7	410	156,095	2,475,648
Elk Basin, 4 wells shut in, *Carbon*	1915	15	34	49	4,000	1,402,517	4,122,115
East Utopia, *Liberty*, (See "Lothair")							
Frannie, *Carbon*	1940		2	2	50	16,005	117,303
Gage, *Musselshell*	1943		7	7	350	111,750	291,446
Kevin-Sunburst Area, 240 wells shut in, *Toole*	1922		1,215	1,215	5,000	1,800,711	48,349,842
Lake Basin, *Stillwater*	1924		2	2	15	6,659	453,724
Lothair, 2 wells shut in, *Liberty*	1943						504
Midway-Brady, 2 wells shut in, *Pondera*	1943		4	4	10	1,244	3,109
Mosser, 2 wells shut in, Yellowstone	1936						5,588
Pondera, 9 wells shut in, *Pondera and Teton*	1927		163	163	860	299,912	7,228,828
Pendroy, 1 well shut in, *Teton*	1943						
Reagan, 2 wells shut in, *Glacier*	1943						6,299
Soap Creek, 6 wells shut in, *Big Horn*	1921						127,495
Sweet Grass Hills (incl. Bearsden, Berthelote, Flat Coulee, Whitlash fields), 1 well shut in, *Liberty and Toole*	1929		8	8	14	7,852	139,630
Total Montana		26	2,573	2,599	24,414	8,884,798	131,768,629
NEBRASKA							
Barada, *Richardson*	1941		16	16	150	65,700	771,443
Dawson, *Richardson*	1940		4	4	100	37,595	150,663
Falls City, *Richardson*	1939		36	36	420	159,870	4,146,730
Shubert, *Richardson*	1940		2	2	50	17,155	133,348
Total Nebraska			58	58	720	280,320	5,202,184

Field, County	Year of Discovery	Oil Producing Wells at End of 1946			Oil Production (Barrels)		
		Flowing	Art. Lift	Total	Daily at End of 1946	Year 1946	Cumulative Through 1946
NEW MEXICO							
New Mexico Summary—							
Northwest New Mexico			91	91	1,160	456,980	9,963,539
Southeast New Mexico		3,005	1,503	4,508	103,000	36,366,906	485,752,167
Total New Mexico		3,005	1,594	4,599	104,160	36,823,886	495,715,706
Northwest New Mexico							
Aztec, *San Juan*	1924						44,291
Blanco, *San Juan*							1,463
Hogback, *San Juan*	1924		7	7	220	87,600	2,447,896
Hospah, *McKinney*	1926		39	39	725	290,175	1,861,888
Rattlesnake, *San Juan*	1924		39	39	95	38,690	4,852,717
Red Mountain, *McKinley*	1935						3,370
Table Mesa, *San Juan*	1926		6	6	120	40,515	751,914
Total N.W., New Mexico			91	91	1,160	456,980	9,963,539
Southeast New Mexico							
Anderson, *Eddy*	1942	14	14	28	175	63,625	663,416
Arrowhead, *Lea*	1940	112	12	124	4,400	1,691,195	11,517,462
Artesia, *Eddy*	1925	51	99	150	375	153,233	6,369,726
Atoka, *Eddy*	1946					157	157
Barber, *Eddy*	1938	2	9	11	200	50,163	728,143
Benson, *Eddy*	1943		4	4	50	23,814	140,523
Black River, *Eddy*	1938			abn'd			3,509
Blinebry, *Lea*	1945	3		3	50	10,189	11,118
Bowers, *Lea*	1946	2		2	75	5,197	5,197
Brown, *Chaves*				abn'd			50
Caprock, *Lea*	1941	26	26	52	1,750	427,081	449,420
Case, *Lea*	1945	2		2	190	70,110	118,459
Commanche, *Chaves*	1939			abn'd			12,357
Copper-Jal, *Lea*	1928	35	73	108	2,150	746,672	24,078,150
Corbin, *Lea*	1939		2	2		1,292	63,807
Culwin	1945		1	1		1,409	2,628
Daugherty	1945		1	1	5	1,765	3,527
Dayton, *Eddy*	1940	8		8	20	7,801	116,519
Dayton, E., *Eddy*							242
Drinkard-Yeso, *Lea*	1944	54		54	3,500	661,075	763,449
Dublin-Ellenburger, *Lea*	1944	1		1	40	14,938	41,780
Eaves, *Lea*	1929	11	14	25	900	325,922	3,607,494
Empire		15	60	75	300	88,974	162,317
Eunice, *Lea*	1928	349	128	477	13,750	5,095,105	81,681,025
Eunice, S., *Lea*	1935	71	15	86	1,500	532,329	8,716,123
Eunice, W., *Lea*	1938	12	18	30	1,050	360,977	1,884,319
Fenton, *Eddy*	1943			abn'd			1,083
Forrest, *Eddy*	1946		3	3	75	14,226	14,226
Getty, *Eddy*	1929		9	9	175	49,603	746,892
Grayburg-Jackson, *Eddy*	1936	205	114	319	5,250	2,087,897	19,707,573
Halfway, *Lea*	1940		5	5	150	59,501	530,857
Hardy, *Lea*	1936	24	15	39	275	99,677	1,877,200
Harrison, *Lea*	1945	1		1	15	4,398	5,639
Henshaw			1	1	4	1,207	4,985
High-Lonesome, *Eddy*	1939			abn'd			30,221
High-Lonesome, S., *Eddy*			1	1		665	8,772
Hobbs, *Lea*	1929	211	41	252	9,750	3,570,678	116,193,620
Inglefield, *Lea*	1928			abn'd			2,000
Langlie-Mattix, *Lea*	1935	247	73	320	3,400	1,198,757	21,370,689
Lea, *Lea*				abn'd		262	66,081
Leo, *Eddy*	1939	5	1	6	30	10,103	135,782
Loco Hills, *Eddy*	1938	145	57	202	2,600	913,954	10,890,950
Lovington, *Lea*		24	28	52	1,650	617,749	4,076,989
Lovington, W., *Lea*		7	36	43	1,600	585,707	1,134,499
Lusk, *Lea*			4	4	50	23,677	162,822
Lusk, E., *Lea*	1942		3	3		2,901	91,035
Lusk, W., *Lea*	1942		2	2		970	2,693
Lynch, *Lea*	1929		9	9	250	99,477	7,477,794
Lynch, N., *Lea*	1938		1	1	13	4,856	119,929
Maljamar, *Lea*	1926	204	44	248	6,175	2,097,564	13,853,312
Maljamar, N., *Lea*	1940		2	2	7	2,917	79,108
Maljamar, S., *Lea*	1940		1	1	15	4,834	30,828
McMillan, *Eddy*	1941			abn'd			136
Monument, *Lea*	1935	454	45	499	17,675	6,561,508	80,399,317
Paddock, *Lea*	1945	54		54	2,750	681,490	746,663
P. C. A.	1945		6	6	200	38,733	71,107
Penrose-Skelly, *Lea*	1935	169	182	351	3,515	1,073,835	17,479,179
Premier		26	27	53	550	251,355	723,881
Red Lakes, *Eddy*	1924	19	29	48	375	149,593	1,088,920
Rhodes, *Lea*	1928	40	3	43	1,000	359,231	2,987,177
Roberts, *Lea*		2		2	40	14,175	48,345
Roberts, W., *Lea*	1945	11	2	13	450	105,315	123,622
Robinson, *Eddy*	1926	5	9	14	100	40,981	565,293
Russell, *Eddy*	1942		29	29	450	108,380	292,520
Salt Lake, *Lea*	1941		10	10	75	29,538	265,370
San Simone, *Eddy*	1943		2	2	12	4,277	27,380
Shugart, *Eddy*	1938	2	9	11	175	66,987	1,242,911
Shugart, N., *Eddy*			20	20	110	47,780	
Skaggs, *Lea*	1937	2	1	3	54	19,131	237,908
Square Lake, *Eddy*	1942	175	34	209	2,200	850,714	4,381,496
Tonto, *Lea*	1944		1	1	25	20,962	53,483
Turkey Track, *Eddy*	1943	7	3	10	35	21,935	60,674
Vacuum, *Lea*	1928	196	161	357	11,000	4,053,413	35,072,856
Watkins, *Lea*	1945		1	1	10	2,673	3,283
Weir, *Lea*	1946	1		1	75	18,256	18,256
Young, *Lea*	1945	1	3	4	160	42,041	55,878
Total S.E., New Mexico		3,005	1,503	4,508	103,000	36,366,906	485,752,167



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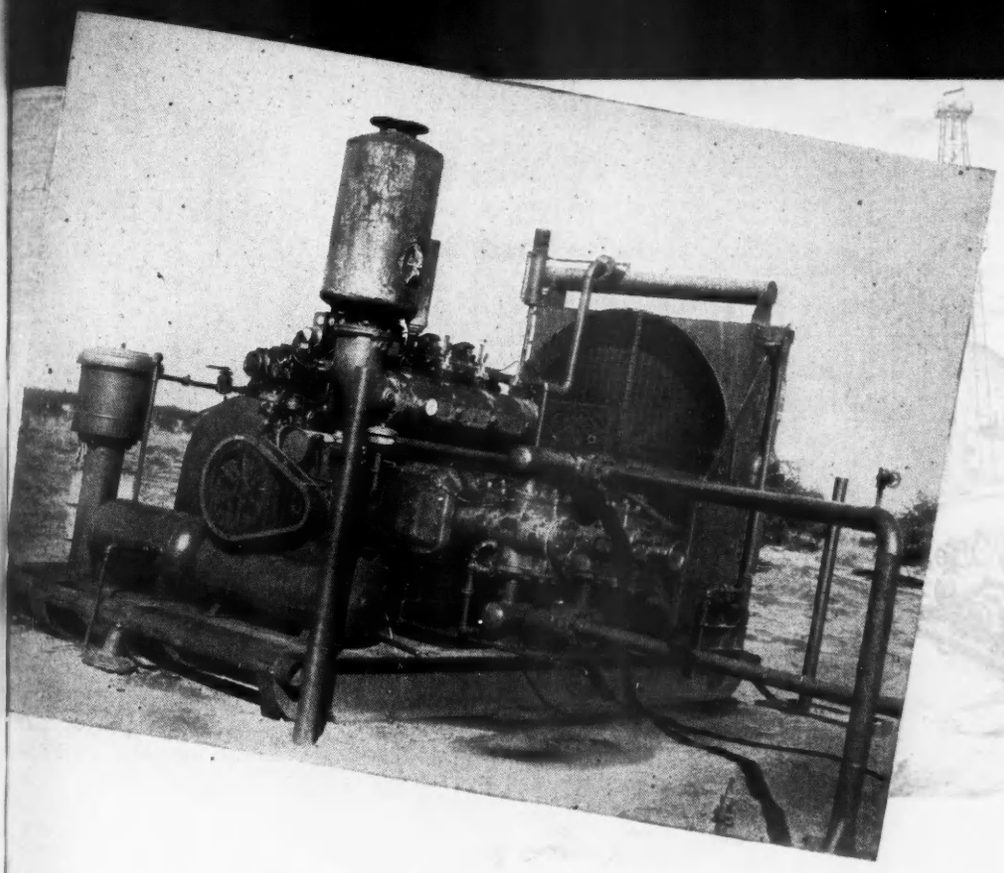
Field, County	Year of Discovery	Oil Producing Wells at End of 1946			Oil Production (Barrels)		
		Flowing	Art. Lift	Total	Daily at End of 1946	Year 1946	Cumulative Through 1946
NEW YORK							
Allegany Field			17,825	17,825	9,500		
Rest of State			4,400	4,400	4,000		
Total New York			22,225	22,225	13,500	4,899,000	159,096,000
OHIO							
Total Ohio		65	22,907	22,972	8,400	2,938,000	607,455,000
OKLAHOMA							
(Okla. Corp. Com'sn. reports 1512 Flowing Wells; 1266 shown below by fields; 246 undistributed.)							
Oklahoma Summary—							
Central Oklahoma				1,835	20,800	7,086,840	207,570,057
East Central Oklahoma				5,390	7,150	2,623,255	323,353,537
East Central, (*Creek County*)				5,652	25,150	8,807,085	817,261,237
Northeastern Oklahoma				14,282	10,700	3,937,620	376,829,493
Northern Oklahoma				1,639	26,200	8,321,635	368,668,580
Oklahoma City Area				1,799	81,697	38,601,670	743,217,722
Osage County Area				7,730	24,800	9,470,290	633,542,636
Seminole Area				4,554	59,225	21,472,220	1,274,786,811
Southeastern Oklahoma				1,805	30,125	11,321,935	188,086,151
Southwestern Oklahoma				8,114	88,915	25,585,405	656,365,006
Total Oklahoma		1,512	51,288	52,800	374,762	137,227,955	5,589,681,230
Central Oklahoma							
Chandler, *Lincoln*	1924			53	525	190,530	12,979,298
Davenport, *Lincoln*	1924			146	910	449,680	13,167,831
Davenport, N., *Lincoln*	1941			2		1,460	71,188
Davenport, W., *Lincoln*	1940			15	190	88,695	258,089
Hoyt, *Lincoln*	1935			7	65	31,755	1,507,402
Laffoon, *Lincoln*	1932			11	410	156,950	2,776,165
Robinson Creek, *Lincoln*	1946			2	350	26,800	26,800
Sac and Fox, *Lincoln*	1924			141	305	118,260	3,890,221
Skellyville, *Lincoln*	1925			14	150	46,355	1,899,255
Stroud, *Lincoln*	1923			50	810	344,560	10,024,368
Wellston, N., *Lincoln*	1936			1	7	3,285	1,521,296
Wilzetta, *Lincoln*	1934			15	865	345,655	1,691,194
Wilzetta, N.W., *Lincoln*	1946			16	2,400	252,580	252,580
Wilzetta, S., *Lincoln*	1936			6	155	60,955	600,335
Cleveland, *Pawnee*	1926			190	325	123,370	40,818,332
Jennings, *Pawnee*	1916			49	105	44,895	4,242,841
Keystone, *Pawnee*	1919			192	235	87,600	3,080,044
Lauderdale, *Pawnee*	1915			155	595	217,175	14,376,243
Maramec, *Pawnee*	1920			79	325	122,640	3,638,690
Terlton, *Pawnee*	1912			13	55	21,535	963,233
Terlton, N., *Pawnee*	1917			60	100	40,880	3,383,322
Watchorn, *Pawnee*	1922			14	115	45,260	7,817,688
Watchorn, E., *Pawnee*	1942			27	2,275	755,550	3,940,606
Coyle, *Payne*	1938			30	1,925	719,415	8,718,509
Coyle, N., *Payne*	1942			1	12	5,110	60,269
Garr, *Payne*	1920			35	330	96,360	3,057,846
Ingalls, *Payne*	1914			24	215	79,570	6,579,377
Mehan, *Payne*	1925			1	3	1,095	2,342,508
Orlando, *Payne*	1929			2	75	27,010	1,102,757
Orlando, E., *Payne*	1941			3	45	17,155	249,648
Ramsey, *Payne*	1938			39	2,125	798,985	11,206,586
Ripley, *Payne*	1923			4	15	7,300	467,328
Ripley, N., *Payne*	1923			2	40	15,330	2,307,114
Yale-Quay, *Payne*	1914			169	1,920	685,105	25,125,702
Unclassified, Central Okla.				267	2,823	1,057,980	13,425,392
Total Central Oklahoma				1,835	20,800	7,086,840	207,570,057
East Central Oklahoma							
Cary, *Okfuskee*	1923			11	90	33,215	1,242,708
Midwest, *Okfuskee*	1942			6	95	32,850	141,627
Okemah, E., *Okfuskee*	1940			7	75	28,105	477,000
Okemah, N., *Okfuskee*	1941			11	85	30,295	302,131
Okemah, W., *Okfuskee*	1941			1	3	1,095	52,291
Okfuskee, *Okfuskee*	1938			5	22	7,300	158,451
Weleetka, *Okfuskee*	1913			75	315	121,180	6,764,519
Weleetka, S., *Okfuskee*	1937			2	2	730	63,953
Weleetka, W., *Okfuskee*	1926			15	175	65,335	1,148,913
Bald Hill, *Okmulgee*	1908			685	690	253,675	50,699,490
Morris, *Okmulgee*	1907			192	260	100,375	25,440,242
Okmulgee, *Okmulgee*	1921			141	135	45,990	10,506,822
Pollyanna, *Okmulgee*	1921			170	230	86,140	3,011,137
Bird Creek, *Tulsa*	1906			1,355	795	293,095	71,950,563
Jenks, *Tulsa*	1901			299	210	77,380	26,907,620
Turley, *Tulsa*	1914			326	195	77,015	6,173,752
Wicey, *Tulsa*	1915			83	125	48,180	2,772,335
Stone Bluff, *Wagoner*	1915			152	265	99,280	4,489,154
Unclassified, E. Cent. Okla.				1,854	3,383	1,222,020	111,050,829
Total E. Cent. Okla.				5,390	7,150	2,623,255	323,353,537

Field, County	Year of Discovery	Oil Producing Wells at End of 1946			Oil Production (Barrels)		
		Flowing	Art. Lift	Total	Daily at End of 1946	Year 1946	Cumulative Through 1946
East Central, Creek County							
Bowden, *Creek*	1906			214	275	106,580	21,453,387
Bristow, *Creek*	1916			118	655	254,405	38,890,456
Cushing, *Creek*	1912			1,690	7,550	2,791,885	373,953,649
Depew, *Creek*	1915			72	905	332,150	38,042,468
Glenn, *Creek*	1905			1,678	6,650	2,418,490	230,722,940
Manford, Shallow, *Creek*	1922			212	395	139,065	6,500,735
Manford, Deep, *Creek*	1937			5	45	16,790	556,655
Olive, *Creek*	1914			173	205	79,570	5,350,602
Slick, *Creek*	1913	10	177	187	2,225	589,110	35,679,243
Stroud, E., *Creek*	1940			34	105	50,005	987,457
Stroud, S.E., *Creek*	1943			84	925	413,910	1,984,818
Tuskegee, *Creek*	1925			3	25	8,030	504,140
Tuskegee, E., *Creek*	1925			25	185	70,445	1,478,296
Wilcox, *Creek*	1919			53	320	125,560	4,544,737
Unclassified, E. Cent. (Creek County)				1,104	4,685	1,411,090	56,611,654
Total E. Cent. Creek Co.				5,652	25,150	8,807,085	817,261,237
Northeastern Oklahoma							
Craig, Nowata, Rogers and Washington Counties			14,282	14,282	10,700	3,937,620	376,829,493
Northern Oklahoma							
Keyes, 5 wells shut in, *Cimarron*	1945					11,315	12,544
Garber, *Garfield*	1916			536	1,495	545,675	58,114,963
New Garber, *Garfield*	1945	3		3	190	59,495	104,374
Deer Creek, *Grant*	1922			9	75	29,200	1,446,622
Lamont, *Grant*	1937			abn'd			788,843
Blackwell, *Kay*	1918			36	340	129,575	5,795,697
Braman, *Kay*	1924			22	82	34,310	4,895,332
Braman, N., *Kay*	1924			44	365	160,965	19,151,874
Braman, S.E., *Kay*	1938			4	37	16,060	545,990
Dilworth, *Kay*	1917			79	695	232,505	6,443,137
Hubbard, *Kay*	1924			33	320	123,005	9,029,796
Ponca City, *Kay*	1917			40	145	56,940	6,768,306
Thomas, *Kay*	1914			13	210	70,080	7,549,340
Tonkawa, *Kay*	1921			143	1,045	396,025	123,663,774
Vernon, *Kay*	1925			26	220	89,790	3,946,895
Coon Creek, *Logan*	1946	30	3	33	4,625	561,370	561,370
Crescent, *Logan*	1933			125	4,015	1,557,455	19,596,349
Crescent, E., *Logan*	1944			3	32	17,155	68,291
Crescent, S., *Logan*	1942			4	40	15,695	83,822
Evansville, N.W., *Logan*	1945			5	395	146,000	158,978
Guthrie, *Logan*	1941			29	280	115,705	3,216,256
Langston, *Logan*	1934			13	225	84,680	2,117,388
Langston, S., *Logan*	1935			1			53,035
Lovell, *Logan*	1928			16	55	22,995	2,798,212
Lovell, S., *Logan*	1934			14	285	104,390	1,077,198
Lovell, S.E., *Logan*	1944			16	1,950	510,635	712,213
Marshall, *Logan*	1927			21	130	52,195	12,022,808
Navina, *Logan*	1941			abn'd			475
Navina, W., *Logan*	1942			6	72	27,375	345,503
Ringwood, *Major*	1945			1	25	9,125	14,350
Billings, Deep, *Noble*	1935			72	1,750	817,235	18,618,511
Billings, Shallow, *Noble*	1917			2	4	2,555	6,230,922
Billings, W., *Noble*	1945			6	520	193,450	197,807
Lucien, *Noble*	1932			117	2,025	803,365	34,074,967
Lucien, N., *Noble*	1936			10	180	73,000	1,517,309
Lucien, N.E., *Noble*	1942			5	105	49,275	582,040
Otoe City, E., *Noble*	1943			17	265	118,990	596,873
Polo, *Noble*	1934			26	1,015	389,455	5,200,901
Polo, S., *Noble*	1945			2	42	21,900	39,055
Red Rock, *Noble*	1945			2	30	22,995	33,281
Unclassified, N., Oklahoma				105	2,916	649,700	10,493,174
Total Northern Okla.				1,639	26,200	8,321,635	368,668,580
Oklahoma City Area							
Corbett, W., *Cleveland*	1945			1	45	19,345	42,353
Moore, *Cleveland*	1935			20	630	217,540	9,598,085
Moore, S., *Cleveland*	1944	22	13	35	1,975	1,131,135	1,962,093
Moore, W., *Cleveland*	1943	33		33	3,025	1,145,005	2,066,796
Arcadia, N.E., *Oklahoma*	1944	5	9	14	1,225	464,645	851,433
Bethany, *Oklahoma*	1945			3	55	32,485	47,810
Britton, *Oklahoma*	1935			20	168	73,365	2,867,937
Britton, S., *Oklahoma*	1938			3	67	23,360	284,906
Edmond, *Oklahoma*	1930			70	1,495	582,905	22,019,992
Edmond, N.E., *Oklahoma*	1941	12	10	22	975	304,775	1,143,799
Edmond, W., *Oklahoma*	1928	684	79	763	43,400	23,564,765	58,544,702
Oklahoma City, *Oklahoma*	1928			774	27,450	10,693,405	642,545,508
Unclassified, Okla. City Area				41	1,187	348,940	1,242,551
Total Okla. City Area				1,799	81,697	38,601,670	743,217,722

aves Time and Construction Costs



A PACKAGED COMPRESSOR STATION... SEMIPORTABLE, SKID-MOUNTED

Performance in the field by the new Clark "Midget Angle" has fully justified the designers' hopes. It definitely answers the need for a self-contained compressor unit combining these features:

1. Can be erected easily and quickly in the field at low installation cost.

2. Can be skid-mounted and readily moved from location to location.

This new Clark unit is ideal for small scale repressuring, temporary pipe line booster service, gas lift generator duty and other services where costs must be kept to a minimum. It is the perfect answer for hard-to-reach, isolated fields.

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SETS THE PACE IN COMPRESSOR PROGRESS

Field, County	Year of Discovery	Oil Producing Wells at End of 1946			Oil Production (Barrels)		
		Flowing	Art. Lift	Total	Daily at End of 1946	Year 1946	Cumulative Through 1946
Osage County Area							
Almeda, *Osage*	1918			63	7	2,920	430,319
Atlantic, *Osage*	1924			90	720	268,275	5,710,701
Avant, *Osage*	1904			735	1,910	716,130	97,713,177
Black Dog, W., *Osage*	1945			4	45	27,010	71,175
Burbank, *Osage and Kay*	1920			1,690	7,700	2,926,570	220,959,449
Burbank, S., *Osage*	1926			220	4,700	1,885,590	42,902,774
Flat Rock, *Osage*	1936			564	575	212,795	41,504,669
Naval Reserve, *Osage*	1933			231	1,320	505,525	20,536,553
Osage City, *Osage*	1904			198	410	163,885	53,764,709
Osage Hominy, *Osage*	1917			138	650	241,265	8,048,681
Wilhorse, *Osage*	1912			389	505	201,115	15,082,289
Unclassified, Osage Co. Area				3,408	6,258	2,319,210	126,818,140
Total Osage Co. Area				7,730	24,800	9,470,290	633,542,636
Seminole Area							
Adams, *Hughes*	1935			10	385	162,425	2,392,434
Fish, *Hughes*	1934			133	1,010	386,170	20,185,343
Furman, *Hughes*	1925			1	8	2,555	1,815,506
Greasy Creek, *Hughes*	1946	4	6	10	525	80,300	80,300
Holdenville, W., *Hughes*	1916			106	390	147,825	6,127,652
Horns Corner, *Hughes*	1943	15	6	21	770	343,465	1,323,880
Papoose, *Hughes*	1923			42	270	103,295	22,558,732
Yeager, *Hughes*	1925			4	75	28,835	2,046,436
Yeager, N., *Hughes*	1936			5	50	17,155	232,188
Cromwell, E., *Okfuskee*	1940			70	885	367,920	5,709,825
Dill, *Okfuskee*	1931			76	485	172,645	5,700,861
Olympic, *Okfuskee*	1934			310	785	313,535	13,334,237
Rusk, *Okfuskee*	1941			11	315	128,845	1,636,206
Asher, *Pottawatomie*	1929			5	50	21,900	3,766,117
Asher, W., *Pottawatomie*	1930			23	140	56,210	7,849,094
Avoca, *Pottawatomie*	1938			18	115	45,625	1,589,777
Brooksville, *Pottawatomie*	1942			10	105	44,530	776,087
Brooksville, S., *Pottawatomie*	1943			1	13	7,300	60,939
Earlsboro, N.W., *Pottawatomie*	1942			9	115	44,895	360,607
Earlsboro, W., *Pottawatomie*	1927			55	315	124,830	4,160,796
Gray, *Pottawatomie*	1932			23	610	229,585	5,803,571
Hotulke, W., *Pottawatomie*	1941			15	175	75,555	1,847,129
Maud, *Pottawatomie*	1928			48	305	112,055	12,792,732
Maud, S., *Pottawatomie*	1941			7	85	31,755	604,981
Prague, *Pottawatomie*	1940			15	245	96,360	1,371,212
Romulus, *Pottawatomie*	1940			16	95	40,515	1,616,840
Romulus Townsite, *Pottawatomie*	1942			2	75	22,995	80,756
Shawnee, *Pottawatomie*	1934			42	355	138,700	3,877,527
Shawnee, E., *Pottawatomie*	1937			abn'd			65,567
Shawnee, N., *Pottawatomie*	1937			4	110	52,195	778,173
Shawnee, N.E., *Pottawatomie*	1942			7	1,090	381,790	1,294,350
St. Louis, *Pottawatomie*	1927			468	4,025	1,500,150	168,869,988
St. Louis, E., *Pottawatomie*	1941			7	25	10,220	252,896
St. Louis, N., *Pottawatomie*	1941			31	60	23,725	1,187,166
Tecumseh, E., *Pottawatomie*	1941			4	20	8,395	465,376
Tecumseh Lake, *Pottawatomie*	1941			5	55	20,440	1,221,442
Allen Deep, *Seminole*	1941			280	2,910	1,120,185	57,416,322
Bethel, *Seminole*	1927			35	105	39,420	2,060,490
Bethel, N., *Seminole*	1925			25	255	109,865	4,762,715
Bethel, N.E., *Seminole*	1941			2	25	9,490	43,811
Bethel, W., *Seminole*	1941			5	100	43,800	500,247
Bowlegs, *Seminole*	1926			177	3,150	1,168,730	126,689,726
Carr City, *Seminole*	1927			60	1,215	456,250	33,577,263
Cheyarha, *Seminole*	1944			107	1,990	1,216,910	2,221,404
Cromwell, *Seminole*	1923			212	1,905	726,350	60,924,323
Cromwell, S., *Seminole*	1937			4	80	30,295	680,020
Dora, *Seminole*	1935			97	510	201,115	5,802,053
Earlsboro, *Seminole*	1926			140	1,835	716,495	129,975,941
Earlsboro, E., *Seminole*	1929			60	925	378,870	40,932,180
Earlsboro, N., *Seminole*	1936			32	895	330,690	8,625,142
Earlsboro, S., *Seminole*	1930			24	810	187,975	9,839,046
Gar Creek, *Seminole*	1946	12	1	13	2,250	152,205	152,205
Grayson, *Seminole*	1935			32	385	153,300	2,640,254
Grayson, N., 1 well shut in, *Seminole*	1942						4,739
Keokuk, *Seminole*	1933			86	1,505	582,175	14,956,565
Konawa, *Seminole*	1938			82	785	284,700	16,729,889
Konawa, E., *Seminole*	1936			5	20	7,665	247,375
Konawa, W., *Seminole*	1938			21	250	98,550	950,421
Konawa, S., *Seminole*	1938			37	175	67,160	1,613,269
Little River, *Seminole*	1927			178	2,910	1,158,875	118,970,077
Little River, E., *Seminole*	1928			50	300	119,355	17,453,723
Little River, N., *Seminole*	1941			5	145	91,250	714,086
Little River, S.E., *Seminole*	1940			4	20	7,300	57,306
Little River, W., *Seminole*	1938			11	100	43,070	1,181,158
Mission, *Seminole*	1928			44	635	239,075	26,974,663
Rosanna, *Seminole*	1924			25	290	67,525	1,926,092
Sasakwa, *Seminole*	1927			56	675	231,410	12,140,790
Sasakwa, Townsite, *Seminole*	1933			7	230	77,015	2,709,363
Searight, *Seminole*	1926			52	545	205,130	35,609,129
Searight, E., *Seminole*	1939			4	13	5,840	205,891
Searight, N., *Seminole*	1934			10	320	124,465	4,260,245
Seminole City, *Seminole*	1926			172	3,650	1,306,700	136,919,505
Seminole, E., *Seminole*	1926			65	405	214,985	9,746,298
Seminole, N., *Seminole*	1940			7	35	13,505	156,686
Seminole, W., *Seminole*	1935			25	635	252,580	15,204,223
Sylvian, *Seminole*	1941			24	1,250	355,875	712,944
Sylvian, N.E., *Seminole*	1935			2	8	4,380	50,284
Traugh, Deep, *Seminole*	1937			6	55	27,010	1,076,743
Traugh, Shallow, *Seminole*	1937			24	130	49,275	1,151,439
Wewoka, *Seminole*	1923			80	655	263,165	35,496,617
Wewoka, E., *Seminole*	1927			8	50	20,440	1,648,021
Wewoka Lake, *Seminole*	1943			36	775	340,545	892,765
Wewoka, N., *Seminole*	1940			4	45	19,710	362,190
Wewoka, N.E., *Seminole*	1941			35	360	128,115	1,480,308
Wewoka, Towsite, *Seminole*	1923			19	235	89,060	6,515,158
Unclassified, Seminole Area				451	8,628	2,589,675	15,988,986
Total Seminole Area				4,554	59,225	21,472,220	1,274,786,811
Southeastern Oklahoma							
Aylesworth, S.E., *Bryan*	1945	3		3	80	35,770	63,578
Ardmore, *Carter*	1942			4	220	63,875	280,514
Brock, *Carter* (E. ½)				130	245	78,840	3,940,127
Caddo, *Carter*	1939			1	15	6,205	72,543
Caddo, Deep, *Carter*	1942			abn'd			149,583
Centrahoma, *Coal*	1937			3	28	14,965	178,573
Butterly, N.W., *Garvin*	1945			4	820	124,465	125,331
Pauls Valley, *Garvin*	1942	52	34	86	5,425	2,231,975	12,159,146
Pauls Valley, E., *Garvin*	1944	68	20	88	1,750	738,760	2,195,430
Cumberland, *Marshall*	1940	125	21	146	10,750	3,695,625	21,563,721
Madill, *Marshall*	1925			41	20	6,935	1,154,721
Allen, Shallow, *Pontotoc*	1913			177	260	90,885	9,198,985
Bebee, *Pontotoc*	1933			203	1,745	661,380	16,213,259
Bebee, E., *Pontotoc*	1930			20	85	32,485	581,092
Fitts, *Pontotoc*	1933			558	3,750	1,518,400	103,733,956
Fitts, N., *Pontotoc*	1934			15	45	16,790	643,471
Fitts, S., *Pontotoc*	1937			22	75	31,390	654,539
Fitts, W., *Pontotoc*	1937			11	105	34,310	625,496
Jesse, *Pontotoc*	1935			58	1,310	508,445	7,826,246
Roper, *Pontotoc*	1942			6	83	33,215	233,510
Steedman, *Pontotoc*	1920			1			23,310
Steedman, N., *Pontotoc*	1928			19	345	135,780	2,074,126
Unclassified, S.E., Oklahoma				209	2,969	1,261,440	4,394,894
Total S.E., Oklahoma				1,805	30,125	11,321,935	188,086,151
Southwestern Oklahoma							
Apache, *Caddo*	1941	20	15	35	4,525	1,590,670	10,412,111
Cement, *Caddo*	1917	50	428	478	13,900	4,801,210	42,812,486
Fox (Old Prod. and Deep), *Carter* (W. ½)	1917			90	575	206,590	15,815,074
Graham, *Carter*	1917			255	785	297,840	28,021,535
Healdton, *Carter* W. ½	1913			1,878	6,700	2,437,835	203,348,947
Hewitt, *Carter*, (W. ½)	1919			895	4,650	1,697,615	103,739,168
Lone Grove, S.W., *Carter*	1944			83	4,600	387,610	1,539,761
Sholem Alechem, *Carter*, (W. ½)	1913			300	1,910	708,465	41,765,615
Tatums, *Carter*, (W. ½)				217	1,575	548,230	19,050,557
Tussy, *Carter*, (W. ½)	1933			149	2,725	904,470	9,157,522
Wildcat Jim, *Carter*, (W. ½)	1914			122	2,450	704,815	19,609,012
Cache Creek, *Cotton*	1946		205	205	6,275	667,950	667,950
Essaquanahdale, *Cotton*	1946			17	295	62,415	62,415
Soldier Creek, *Cotton*	1946	24	41	65	3,350	186,880	186,880
Walters, *Cotton*	1917			225	820	277,035	26,719,713
Antioch, S.W., *Garvin*	1946	28	1	29	5,350	607,360	607,360
Hoover, N.W., *Garvin*	1944			49	1,385	447,490	779,847
Katie, *Garvin*	1946	1		1	150	9,985	9,985
Maysville, S.W., *Garvin*	1946	9		9	950	49,275	49,275
Robberson, *Garvin*	1921			162	680	253,675	16,562,243
Knox, *Grady*	1924			176	950	374,490	17,246,022
Altus, *Jackson*	1934			119	335	119,720	2,363,503
Tipton, *Jackson*	1935			57	215	82,125	2,254,928
Oscar, *Jefferson*	1924			195	895	319,740	12,029,673
Hobart, *Kiowa*	1939			22	80	31,755	1,531,208
Blue Hill, *McClain*	1946	1		1	300	32,485	32,485
Iron Chapel, *McClain*	1945	1		1	200	91,980	92,910
Lindsay, N., *McClain*	1945	5	2	7	475	86,870	122,195
Washington, *McClain*	1944	4	1	5	750	268,640	412,244
Wayne, S. W., *McClain*	1946	5		5	700	59,860	59,860
Commanche, *Stephens*	1918			127	295	109,865	11,055,364
Duncan, N., *Stephens*	1920			82	250	100,010	4,810,469
Duncan, W., *Stephens*	1919			105	1,775	678,900	7,851,070
Empire, *Stephens*	1920			235	895	351,495	16,600,053
Loco, *Stephens*	1915			104	225	93,805	1,943,378
Loco, W., *Stephens*	1941			90	385	158,775	994,811
Milroy, Shallow, *Stephens*	1916			146	255	96,360	3,835,287
Milroy, Deep, *Stephens*	1937			1	85	36,500	815,140
Velma, Shallow, *Stephens*	1917	28	792	820	7,350	1,892,890	10,376,580
Velma, Deep, *Stephens*	1942			6	585	158,045	645,603
Velma, W., *Stephens*	1946	12	9	21	2,650	405,880	405,880
Fredrick, *Tillman*	1937			3	15	5,475	54,414
Fredrick, W., *Tillman*	1937			25	375	152,205	3,689,185
Unclassified, S.W., Okla				497	5,225	3,030,120	16,225,288
Total S.W., Oklahoma				8,114	88,915	25,585,405	656,365,006
PENNSYLVANIA							
Total Pennsylvania			82,998	82,998	35,700	13,067,000	1,076,644,000

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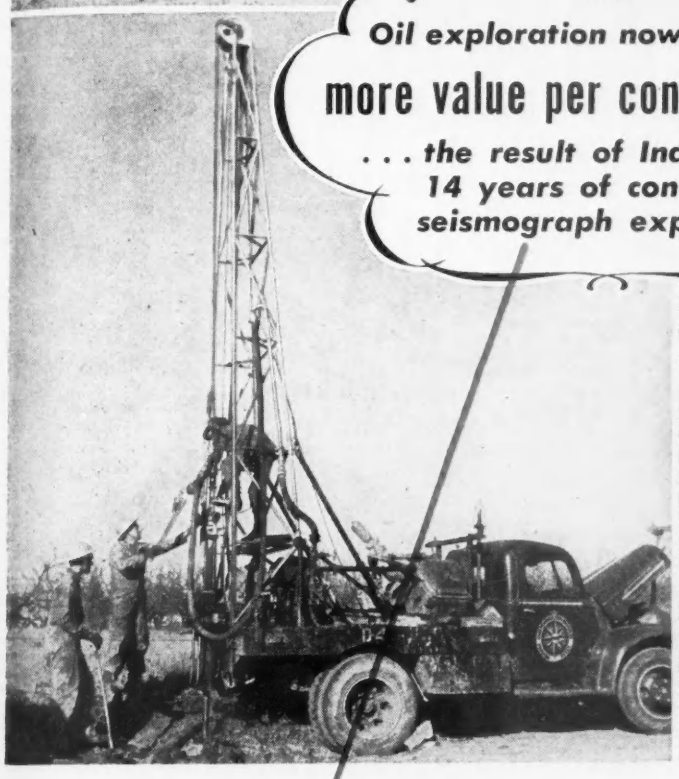

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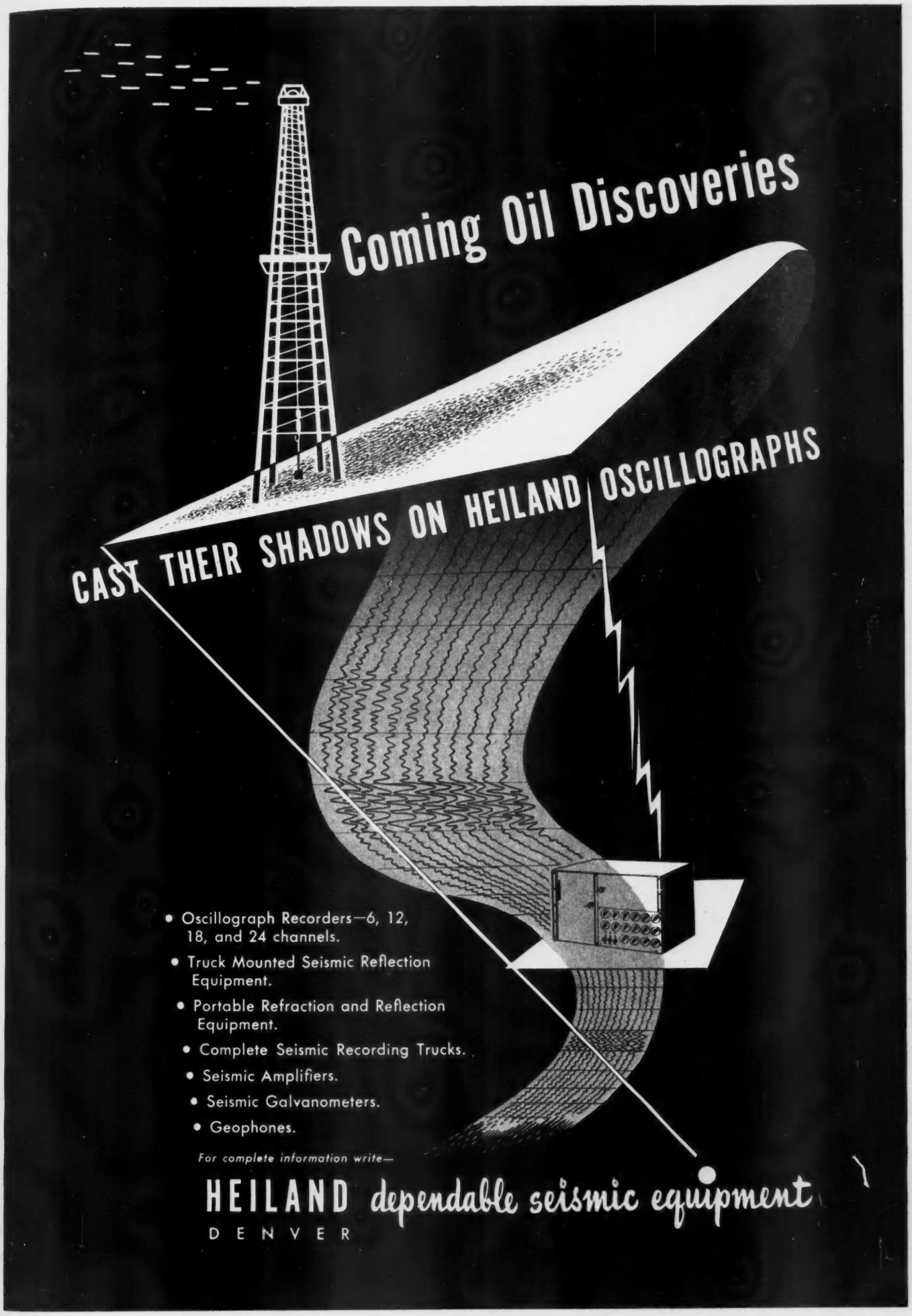
ESPERSON BUILDING **HOUSTON, TEXAS**

Field, County	Year of Discovery	Oil Producing Wells at End of 1946			Oil Production (Barrels)		
		Flowing	Art. Lift	Total	Daily at End of 1946	Year 1946	Cumulative Through 1946
TENNESSEE							
Total Tennessee, *Clay, Fentress, Morgan, Pickett, Scott*			22	22	35	12,000	470,000
TEXAS *Texas Summary—							
Dist. 1: South Central Texas		117	3,132	3,249	18,850	7,034,940	258,298,483
Dist. 2: Middle Gulf Coast		2,508	775	3,283	134,775	51,452,663	395,224,911
Dist. 3: Upper Gulf Coast		4,982	3,250	8,232	422,625	167,525,921	2,132,722,626
Dist. 4: Lower Gulf Coast		3,560	5,194	8,754	208,800	79,481,028	680,292,851
Dist. 5: East Central Texas		295	1,398	1,693	34,615	14,378,507	467,886,105
Dist. 6: Northeast Texas		14,939	10,636	25,575	415,375	157,719,860	2,659,214,862
Dist. 7-B: N. Central Texas		651	6,312	6,963	34,500	12,002,703	422,571,622
Dist. 7-C: West Texas		152	1,297	1,449	27,700	9,948,063	198,315,229
Dist. 8: West Texas		8,584	8,761	17,345	499,725	181,126,503	1,707,299,130
Dist. 9: North Texas		1,250	18,838	20,088	118,000	45,210,512	949,537,612
Dist. 10: Texas Panhandle		43	6,085	6,128	81,100	30,305,114	569,571,943
Total Texas		37,081	65,678	102,-759	1,996,-065	756,185,814	10,440,935,-375
Texas, District 1 (South Central Texas)							
Alta Vista, *Bexar*	1915			abn'd			61,444
Bateman (N. Dale), *Bastrop*	1932		3	3	7	2,973	648,487
Batesville, *Zavalla*	1937			abn'd			12,000
Bee Creek, *Caldwell*	1940		8	8	25	9,030	308,890
Bob Rose, *Caldwell*	1932				5	1,215	242,844
Buchanan, *Caldwell*	1928		20	20	53	18,235	533,387
Burdette Wells, *Caldwell*	1938			abn'd			40,396
Calliham, *McMullen*	1919		54	54	100	38,873	1,085,200
Campana, S., *McMullen*	1941	20	5	25	350	125,719	395,856
Carrizo, *Dimmit*	1941	1		1			5,882
Carrizo Park, *Dimmit*	1945				10	1,337	1,337
Carroll Estate, *Bastrop*	1933			abn'd			100,487
Carver-Kallison, (Nash Creek), *Guadalupe*	1937			abn'd			46,012
Cedar Creek, *Bastrop*	1913			abn'd			435,003
Cedar Creek, N., *Bastrop*	1934			abn'd			70,018
Chapman-Abbott, *Williamson*	1930		70	70	115	42,235	4,773,720
Charlotte, *Atascosa*	1944	9	4	13	300	160,246	280,641
Chicon Lake, *Medina*	1934		67	67	30	9,806	130,317
Clark, *Guadalupe*	1935		1	1	15	3,044	405,026
Cooksey, *Bexar*	1930			abn'd			61,000
Dale, *Caldwell*	1927		40	40	60	22,423	1,559,840
Dale, W., *Caldwell*	1937		7	7	20	7,160	147,383
Darst Creek, *Guadalupe*	1929	1	318	319	7,000	2,576,863	65,702,077
Day, *Guadalupe*	1940			abn'd			575
Deupree, *Bexar*	1936		2	2	2	654	63,171
Dunlap, *Caldwell*	1931		10	10	35	13,666	191,474
Dunlay, *Medina*	1938			abn'd			985
Eckert, *Bexar*	1928		98	98	45	17,350	1,050,157
Elgin, *Bastrop*	1941			abn'd			1,648
Ellison-Young, *Caldwell*	1937		8	8	20	6,473	169,520
Espanda Mission, *Bexar*	1926			abn'd			77
Essell, *McMullen-Live Oak*	1937		128	128	575	218,797	3,626,102
Fairfield (La Coste), *Bexar*	1938		1	1			4,945
Gas Ridge, *Bexar*	1937		75	75	40	13,136	88,161
Green Branch, *McMullen*	1944	2	1	3	65	24,491	76,784
Hilbig, *Bastrop*	1933	12		12	595	228,551	2,573,738
Imogene, *Atascosa*	1942	24	7	31	600	243,427	585,890
Jacob, *McMullen*	1932		73	73	200	75,861	1,961,647
Jones, *Bexar*	1916			abn'd		10	969
Jourdanton, *Atascosa*	1946	4	1	5	200	31,771	31,771
Kimbro (Manda), *Travis*	1934		2	2	3	581	19,209
Larremore, *Cadwell*	1900			abn'd			343,124
La Vernia (Elm Creek), *Guadalupe*	1939		26	26	15	7,676	73,329
Lentz, *Bastrop*	1941		3	3	25	9,396	49,745
Loma Alto, *McMullen*	1935		2	2	40	14,480	222,785
Loma Alto, Wilcox, *McMullen*	1944	6		6	125	51,303	108,822
Lone Oak, *Bexar*	1935			abn'd			2,000
Luling-Branyon, *Guadalupe-Caldwell*	1923		649	649	3,725	1,404,649	87,969,666
Lytton Springs, *Caldwell*	1925		129	129	200	72,128	8,362,330
Manford, *Guadalupe*	1929		1	1	10	4,436	512,555
Mathews, *Williamson*	1933		10	10	10	3,614	156,013
Minerva-Rockdale, *Milam*	1921		421	421	150	55,224	3,950,790
Muil, *Atascosa*	1946	2		2	40	7,185	7,185
Munson, *McMullen*	1938		11	11	25	9,948	229,703
Noack, *Williamson*	1939		30	30	30	11,263	489,781
Pearsall, Austin Chalk, *Frio*	1935	2	20	22	225	374,809	3,123,285
Pearsall, Navarro sd, *Frio*	1935	7	24	31	900	54,900	54,900
Riddle, *Bastrop*	1938		2	2	20	8,262	122,751
Salt Flat, *Caldwell*	1928	8	196	204	1,450	553,345	46,430,531
Salt Flat, N., *Caldwell*	1939			abn'd			33,748
Schattel, *Frio*	1938			abn'd			633
Schimmel-Batts, *Bastrop*	1935			abn'd			7,000
Somerset, *Bexar-Atascosa*	1917		325	325	125	52,352	11,916,019
Southton (Yturri-Southton), *Bexar*	1922		103	103	30	10,914	715,748
Spiller, *Guadalupe*	1938		3	3	8	3,266	19,208
Staples, *Guadalupe*	1935			abn'd			1,000
Taylor-Ina, *Medina*	1901					1,422	167,211
Tenney Creek, *Caldwell*	1940		20	20	50	25,208	493,706
Thrall, *Williamson*	1915		21	21	70	23,071	2,573,862
Turney	1946		1	1			111
TEXAS							
United, *Guadalupe*	1944	1		1	5	2,686	15,673
Von Ormy, *Bexar*	1935		105	105	40	14,100	321,549
Walnut Creek, *Caldwell*	1938						4,134
Walnut Creek, New, *Caldwell*			1	1	7	1,042	1,042
Washburn Ranch, *La Salle*	1940	14	8	22	600	304,784	1,211,998
Weigang (Fashing), *Atascosa*	1946	4		4	400	40,510	40,510
Yoast, *Bastrop*	1928		5	5	30	10,174	983,206
Zobroski, *Guadalupe*	1936		13	13	25	8,866	288,784
Total, Texas, District 1		117	3,132	3,249	18,850	7,034,940	258,298,483
Texas, District 2 (Middle Gulf Coast)							
Albert, W., *Live Oak*	1945	1		1	15	6,236	10,400
Albrecht, *Goliad*	1944			abn'd			8,617
Beeville (Church), *Bee*	1935			abn'd			433
Blanconia, *Bee*	1943	8		8	120	42,553	126,662
Bonnie View, *Refugio*	1939	54		54	2,500	790,398	1,149,886
Boyce, *Goliad*	1945	10		10	400	138,333	162,505
Burnell, *Karnes*	1938	16	32	48	575	232,995	1,509,703
Cabeza Creek, *Goliad*	1943	6		6	425	116,891	171,968
Cabeza Creek, S., *Goliad*	1944	4		4	200	74,731	84,724
Caesar (Ruhman), *Bee*	1934		12	12	30	9,985	1,086,872
Caesar, S., *Bee*	1942	35	4	39	1,375	655,390	2,365,466
Shapa, *Live Oak*	1944			abn'd			2,393
Clemens	1945			abn'd			3,154
Coleto Creek, *Victoria*	1934	25	14	39	700	268,816	2,285,206
Collier, *Jackson*	1942	3		3	100	44,164	147,939
Cologne, *Victoria*	1939	2	5	7	110	42,846	402,411
Coloma Creek, *Calhoun*	1941			abn'd			53,366
Cordele, *Jackson*	1938	25	19	44	860	349,086	3,710,598
Cosden, W., *Bee*	1944	1	1	2	25	5,345	17,054
Diamond Half, *Goliad*	1936		5	5	50	18,035	691,086
Dinero, *Live Oak*	1935			abn'd			83,913
Dirks, *Bee*	1934		72	72	450	239,185	7,298,930
Fagan, *Refugio*	1940	3		3	10	3,917	102,514
Falls City, *Karnes*	1944	54		54	4,600	1,171,820	1,417,012
Fannin, N., *Goliad*	1945	1		1	2	779	2,427
Fort Merrill, *Live Oak*	1935			abn'd			32,000
Francitas, *Jackson*	1938	19		19	800	328,871	1,202,426
Gaffney, *Victoria*	1945	2	1	3	50	19,782	38,771
Ganado, *Jackson*	1937	2	4	6	75	33,791	374,017
Ganado, Deep, *Jackson*	1941	41	3	44	1,375	571,047	2,274,928
Ganado, W., *Jackson*	1940	50	4	54	2,075	760,884	2,858,213
Genevieve, *Bee*	1941			abn'd			1,206
Goebel, *Live Oak*	1943	1		1	2	779	33,637
Goliad, W., *Goliad*	1945	2		2	15	6,971	37,749
Grayburg (Kimble), *Bee*	1934			abn'd			5,000
Green, *Karnes*	1944		2	2	55	23,914	61,981
Greta, *Refugio*	1933	148	39	187	8,700	3,173,838	38,401,025
Greta, Deep, *Refugio*	1933	11	1	12	800	245,571	2,169,850
Harmon, *Jackson*	1942	7	10	17	350	139,735	757,657
Heyser, *Calhoun*	1936	125	57	182	5,050	2,282,465	28,895,034
Hinnant, *Live Oak*	1945	1		1	50	19,715	24,274
Hobson, *Karnes*	1943	11		11	550	201,906	783,484
Holzmark, *Bee*	1939	4	3	7	50	23,653	223,735
Hondo Creek, *Karnes*	1943	2	2	4	100	38,882	172,553
Hordes Creek, *Goliad*	1935	1		1	8	3,605	91,868
Hysaw, *Karnes*	1945	8		8	125	52,561	56,687
Ike, *Live Oak*			3	3	30	3,524	3,524
Jay Welder (Duck Bay), *Calhoun*	1940	5		5	275	97,226	435,961
Keeran, *Victoria*	1932	7	9	16	750	279,571	2,686,348
Kittie, *Live Oak*	1943	3		3		326	2,120
Koontz, *Victoria*	1944	5		5	45	22,445	63,670
La Rosa, *Refugio*	1938	69	5	74	3,250	1,299,498	8,587,603
La Rosa, N., *Refugio*	1943	1		1	90	32,366	107,617
La Salle, *Jackson*	1944	6	1	7	150	82,983	167,606
La Ward, N., *Jackson*	1941	87	14	101	2,300	918,830	4,126,262
Little Kentucky, *Jackson*	1943	4		4	150	53,433	149,211
Lolita, *Jackson*	1940	170	18	188	5,125	2,291,540	12,536,408
McFaddin, *Victoria*	1930	58	30	88	4,900	1,699,298	10,867,565
McFaddin, N., *Victoria*	1937	5		5	180	77,424	308,300
McMurry, *Bee*	1937			abn'd			6,934
McNeil, *Live Oak*	1934	2		2	22	8,862	306,624
Maurbro, *Jackson*	1941	68	16	84	1,660	723,259	3,183,519
Mauritz, *Jackson*	1936	6	4	10	350	137,407	1,175,722
Mauritz, E., *Jackson*	1944	3		3	65	20,539	50,008
Mauritz, W., *Jackson*	1942	14		14	525	248,042	1,116,649
Mayo, *Jackson*	1942	33	7	40	1,225	604,027	2,296,739
Melon Creek, *Refugio*	1939	10		10	325	118,979	1,183,255
Mineral, *Bee*	1943	1		1	8	1,018	1,018
Mission River, *Refugio*	1938	3	11	14	350	135,007	1,909,964
Mission Valley, *Live Oak*	1944			abn'd			6,098
Moody Ranch, *Jackson*	1945		1	1	25	8,475	14,910
Mt. Lucas, *Live Oak*	1923		3	3	30	11,502	260,061
Mustang Creek, *Jackson*	1942			abn'd			2,568
Normanna, *Bee*	1929	1	2	3	15	5,003	119,061
Normanna, N., *Bee*							776
Oakville, *Live Oak*	1937	1	21	22	250	95,390	1,376,805
Oakville-Wilcox, *Live Oak*	1944		1	1	5	1,419	1,419
O'Connor-McFaddin, *Victoria*	1931		2	2	23	8,900	634,965
Ormsby, *Wilson*	1945						270
Ottine, *Gonzales*	1902			abn'd			12,000
Pettus, *Bee*	1928		27	27	625	254,235	9,771,494
Pettus, New, *Bee*	1934		38	38	475	166,680	4,076,805
Pettus, N., Wilcox, *Bee*	1942	4		4	125	25,640	26,189
Placedo, *Victoria*	1935	37	101	138	4,475	1,635,981	20,317,155
Placedo, E., *Victoria*	1938	27	5	32	1,100	515,651	2,374,445

*Texas districts shown here are Texas Railroad Commission subdivisions.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Field, County	Year of Discovery	Oil Producing Wells at End of 1946			Oil Production (Barrels)		
		Flowing	Art. Lift	Total	Daily at End of 1946	Year 1946	Cumulative Through 1946
Texas, District 2—Continued							
Plummer, *Bee*	1937	1		1	25	8,973	299,050
Poehler, *Goliad*	1946	4	1	5	300	75,140	75,140
Porter, *Karnes*	1943	11	1	12	500	207,959	773,875
Port Lavaca, *Calhoun*	1934			abn'd			420,941
Poth, *Wilson*	1943			abn'd			100
Pridham's Lake, *Victoria*	1944	13	1	14	330	102,325	168,678
Pridham's Lake, W., *Victoria*		2		2	270	43,723	43,723
Ray, *Bee*	1935		7	7	110	36,765	1,758,990
Refugio, Fox, *Refugio*		14	4	18	550	169,105	4,922,634
Refugio, Heard, *Refugio*		37		37	1,800	442,574	498,851
Refugio, New, *Refugio*		36	42	78	3,625	1,453,358	13,915,223
Refugio, N., *Refugio*	1941	6	1	7	75	31,671	184,699
Refugio, Old, *Refugio*	1929	6	24	30	450	141,744	30,683,932
Runge, *Karnes*	1943	10	1	11	575	231,382	530,151
Rutledge, *Bee*	1935			abn'd			21,000
Sarco, *Goliad*	1938			abn'd			2,401
Sheriff, *Calhoun*	1945	18		18	550	190,528	194,000
Slick, *Goliad-DeWitt*	1930			abn'd			75,617
Slick, Wilcox, *Goliad*	1943	48		48	4,100	1,593,923	3,931,255
Silva, *Bee*	1946		1	1	10	808	808
Stewart, *Jackson*	1942	7	1	8	265	126,864	456,428
Stockdale, *Wilson*	1945			abn'd			685
Telferner, *Victoria*	1940	2	2	4	10	7,487	40,441
Telferner, E., *Victoria*	1938	3		3	50	22,805	69,323
Terrell, *Victoria*	1940			abn'd			13,633
Terrel Point, *Goliad*	1944	4		4	30	12,278	37,287
Texana, *Jackson*	1939	2		2	5	3,201	42,030
Theis, *Bee*	1945	2	2	4	200	86,333	96,986
Thomaston, *DeWitt*	1940						6,503
Tom O'Connor, *Refugio*	1934	493	1	494	40,000	15,026,743	98,284,215
Tuleta, *Bee*	1934		13	13	75	35,719	2,087,790
Tulsita, *Bee*	1939		1	1	5	1,453	16,730
Tulsita, Wilcox, *Bee*	1945	17		17	725	261,490	324,388
Tynan, *Bee*	1943	1		1	10	5,651	21,738
Vanderbilt, *Jackson*	1934			abn'd			250,870
Victoria, *Victoria*	1940	1	9	10	100	38,026	492,044
Vienne, *Lavaca*	1941				45	11,136	16,734
Voss, *Bee*	1936			abn'd			78,446
Warmsley, *DeWitt*	1944	1		1			194
Weesache, *Goliad*	1944		1	1	10	3,225	7,522
Weser, *Goliad*	1937			abn'd			35,433
West Ranch, *Jackson*	1938	429	17	446	17,500	7,060,268	40,240,584
White Creek, *Live Oak*	1939		30	30	75	29,602	514,987
White Creek, S., *Live Oak*	1941		6	6	50	26,637	240,401
Whittington, *Live Oak*	1935			abn'd			3,000
Woodsboro, *Refugio*	1941	10		10	350	119,673	526,792
Word, *Lavaca*	1945	2		2			1,546
Yougeen, *Bee*	1944	15		15	300	120,139	158,139
Total Texas, District 2		2,508	775	3,283	134,775	51,452,663	395,224,911
Texas, District 3 (Upper Gulf Coast)							
Abel Borden, *Wharton*	1940			abn'd			46,945
Aldine, *Harris*	1939	1		1	45	18,213	182,851
Alief, *Harris*	1942						6,327
Aldine, W., *Harris*	1942			abn'd			9,410
Allen, *Brazoria*	1927			abn'd			90,008
Alta Loma, *Galveston*	1940	6		6	150	78,008	1,070,593
Altair, *Colorado*	1945			abn'd			18,055
Amelia, *Jefferson*	1936	94		94	3,750	1,486,215	13,423,539
Anahuac, *Chambers*	1935	321	22	343	25,200	10,124,718	65,763,370
Angleton, *Brazoria*	1939	1		1	9	3,404	57,046
Armour (McCrosky), *Matagorda*	1938		2	2	10	3,848	189,656
Arnim, *Fayette*	1945		8	8	125	40,005	51,745
Ariola, *Hardin*	1932		12	12	175	73,944	2,720,755
Bailey's Prairie, *Brazoria*	1940			abn'd			1,766
Bammel, *Harris*	1937	2		2	220	73,457	358,879
Barbers Hill, *Chambers*	1916	22	98	120	5,150	1,848,844	85,132,880
Batson, New, *Hardin*	1934	3	6	9	175	72,050	2,635,789
Batson, Old, *Hardin*	1903		118	118	240	92,595	38,685,854
Bay City, *Matagorda*	1934	51		51	3,900	1,422,564	11,097,973
Bay City, E., *Matagorda*	1945						2,012
Bay City, N., *Matagorda*	1942	18	1	19	1,025	469,455	1,611,052
Beaumont, W., *Jefferson*	1936	22	28	50	1,400	545,121	7,096,252
Beech Creek, *Hardin*	1945	2		2	125	59,828	126,792
Beech Creek, N., *Hardin*	1944	1		1	125	46,542	119,553
Big Creek, *Fort Bend*	1922	2	15	17	375	148,671	10,840,289
Big Hill, *Jefferson*	1923			abn'd			14,000
Big Hill, (Gulf), *Matagorda*	1904			abn'd			211,000
Bland, *Orange*	1941			abn'd			20,788
Blessing, *Matagorda*	1940			abn'd			25,358
Blessing, E., *Matagorda*	1946	1		1	20	3,856	3,856
Blue Lake, *Brazoria*	1945	13	1	14	1,200	454,255	641,929
Blue Ridge, *Fort Bend*	1919	6	34	40	425	171,119	12,783,619
Boling, *Wharton-Fort Bend*	1925	9	26	35	850	332,527	9,284,663
Brenham, *Washington*	1915		6	6	1	341	391,953
Brookshire, *Waller-Austin*	1934			abn'd			22,420
Buckeye, *Matagorda*	1932		1	1	7	2,605	844,841
Buckeye, S., *Matagorda*	1942	2		2	15	5,264	62,127
Buck Snag, *Colorado*	1942	1		1	4	1,771	23,821
Buttermilk Slough, *Matagorda*	1939			abn'd			10,774
Call, *Newton*	1937			abn'd			11,415
Camp Eleven, *Tyler*	1942	1	1	2	135	53,012	383,579
Caplen, *Galveston*	1939	15	1	16	1,100	412,647	2,066,680
Cedar Bayou, *Chambers*	1938		1	1	15	5,529	42,487
Cedar Point, *Chambers*	1938	25	2	27	1,650	563,555	3,702,389
Cheek, N., *Jefferson*	1937			abn'd			33,000
Chenango, *Brazoria*	1941		1	1	25	8,521	110,856
Chesterville, *Colorado*	1943			abn'd		969	3,993
China, S., *Jefferson*	1939	9	3	12	650	229,630	1,430,266
Chocolate Bayou, *Brazoria*	1939	10		10	900	278,429	824,511
Chriesman (Tanglewood), *Burleson*	1938			abn'd			14,753
Cistern, *Fayette*	1943		4	4	50	19,145	43,899
Clam Lake (McFadden), *Jefferson*	1937	13	2	15	825	322,585	1,506,590
Clay Creek, *Washington*	1928		46	46	550	201,809	5,624,874
Clear Lake, *Harris*	1938	33	1	34	3,400	1,310,142	7,642,323
Cleveland, *Liberty*	1933	3	4	7	250	105,230	1,757,308
Cleveland, N., (Grogan), *Liberty*	1945	2		2	150	24,705	43,574
Clinton, *Harris*	1936	6	1	7	120	46,906	494,837
Clodine, *Fort Bend*	1941	24		24	600	244,274	1,273,882
Cold Springs, *San Jacinto*	1945	9	2	11	400	155,319	170,152
Columbus, *Colorado*	1944	2		2	50	20,707	38,432
Conroe, *Montgomery*	1931	708	177	885	53,000	20,702,898	227,235,567
Conroe, W., *Montgomery*	1941	1		1	20	6,883	47,668
Cotton Lake, *Chambers*	1936	1	3	4	125	53,668	1,143,478
Cotton Lake, S., *Chambers*	1937	6	17	23	425	187,747	3,988,190
Cottonwood, *Liberty*	1943				75	29,244	117,070
Danoval, *Wharton*	1944	4		4	115	35,442	80,868
Damon Mound, *Brazoria*	1916		24	24	125	47,439	10,045,627
Danbury, *Brazoria*	1934	6	12	18	400	120,096	1,259,926
Danbury, 5655-ft. sand, *Brazoria*	1945	7	3	10	740	266,647	936,262
Danbury, 6200-ft. sand, *Brazoria*		1		1	85	37,524	37,524
Danbury, 7625-ft. sand, *Brazoria*	1945	2		2	165	75,493	123,759
Dickinson, *Galveston*	1934	29	10	39	1,175	441,943	9,383,372
Double Gum Bayou, (S. Anahuac), *Chambers*	1943						1,013
Dyersdale, *Harris*	1940	27	41	68	2,300	862,104	3,680,815
El Campo, *Wharton*	1944	7	9	16	375	135,214	240,600
Elm Bayou, *Chambers*	1942	1		1	75	28,967	109,822
Esperson, *Liberty*	1929	24	39	63	1,600	619,887	9,968,304
Esperson, S., *Liberty*	1939	25		25	775	333,599	2,223,664
Eureka Heights, *Harris*	1934	3	14	17	550	239,692	4,946,146
Fairbanks, *Harris*	1938	240	29	269	5,600	2,169,069	21,418,545
Fannett, *Jefferson*	1927	56	16	72	7,600	3,345,224	12,554,901
Fig Ridge, *Chambers*	1940	69		69	5,925	2,565,082	8,986,613
Fisher's Reef, *Chambers*	1940	2		2	100	45,581	226,533
Fostoria, *Montgomery*	1942			abn'd			7,298
Fred, *Tyler*	1941	1	2	3	75	24,556	190,694
Garwood, *Colorado*	1932			abn'd			6,198
Garwood, W., *Colorado*	1941	4	1	5	100	25,324	170,609
Gillock, *Galveston*	1935	66	25	91	2,125	1,306,183	12,858,113
Glasscock, *Galveston*	1944	1		1	40	14,642	22,370
Goodrich, *Polk*	1941			abn'd			72,899
Goose Creek, *Harris*	1907	7	80	87	1,150	426,202	80,528,670
Green Lake, *Galveston*	1936			abn'd			139,667
Hamel, *Colorado*	1945	5		5	550	122,560	134,057
Hamman, *Matagorda*	1936	2	16	18	775	277,255	4,932,824
Hampton, *Hardin*	1942			abn'd			54,242
Hankhamer, Old, *Liberty*	1929	5	18	23	400	173,587	6,452,381
Hankhamer, New, *Liberty*	1934	3	3	6	225	84,230	1,065,935
Hardin, *Liberty*	1935	26	61	87	1,800	938,933	12,548,184
Hastings, *Brazoria*	1934	613	44	657	51,100	19,354,870	125,998,741
Hawkinsville, *Matagorda*	1936			abn'd			2,000
High Island, *Galveston*	1922	26	35	61	2,600	977,467	22,375,708
Hillje, *Wharton*	1939	7	10	17	525	199,907	1,201,429
Hillje, S., *Wharton*	1945	8		8	150	70,098	88,640
Hitchcock, *Galveston*	1937	10	7	17	900	283,676	1,863,269
Hockley, *Harris*	1923		1	1	125	32,204	63,593
Hoskins Mound, *Brazoria*	1906			abn'd			32,000
Hull, *Liberty*	1918	6	149	155	3,000	1,220,574	102,251,571
Humble, Deep, (Light), *Harris*	1928	5	31	36	800	336,962	14,634,956
Humble, Shallow, *Harris*	1904	4	174	178	1,125	434,670	116,118,967
Hutchins, *Wharton*	1946	4		4	300	41,713	41,713
Hyatt, S., *Tyler*	1945	2		2	20	22,291	42,971
Jackson Pasture, *Chambers*	1943	2		2	25	28,040	63,725
Joe's Lake, *Tyler*	1937		38	38	750	295,037	4,834,728
Katy, *Waller*	1938			abn'd			368,537
Katy, N., *Waller*	1943	47		47	1,400	538,564	1,266,996
Kirby, *Liberty*	1943	17		17	550	219,881	786,319
Kubela, *Wharton*	1936	7	11	18	750	222,242	2,148,489
La Belle, *Jefferson*	1937	8		8	1,150	432,118	1,687,482
Lake Creek, *Montgomery*	1941	3		3	50	28,979	147,430
Lane City, *Wharton*	1944	13		13	675	255,239	337,466
League City, *Galveston*	1938	14	13	27	1,900	769,265	5,761,659
Liverpool, *Brazoria*	1946	1		1	125	6,124	6,124
Livingston, *Polk*	1930	2	50	52	1,125	450,769	9,168,717
Livingston, Sparta, *Polk*	1942	19	1	20	975	382,943	786,001
Livingston, Wilcox, *Polk*	1942	42	5	47	2,375	874,028	1,500,235
Lockridge, *Brazoria*	1937	30	4	34	1,450	572,008	6,473,485
Lost Lake, *Chambers*	1929		2	2	1	439	1,047,459
Louise, *Wharton*	1933	3	26	29	700	271,587	5,199,243
Lovell's Lake, *Jefferson*	1938	106	9	115	3,750	1,712,072	11,591,549
Lovell's Lake, N., *Jefferson*	1944	4		4	170	77,794	145,313
Lucky, *Matagorda*	1941	3		3	250	71,187	366,482
Magnett-Withers, *Wharton*	1936	187	66	253	6,800	2,855,720	24,410,775
Magnolia, *Montgomery*	1941			abn'd			1,682
Manvel, *Brazoria*	1931	77	69	146	6,400	2,654,824	34,408,754
Markham, *Matagorda*	1908	13	26	39	630	240,099	9,861,077
Markham, N., *Matagorda*	1938						29,845
Markham, N., Carlson, *Matagorda*	1941	4		4	500	219,004	740,324
Markham, N., Cayce, *Matagorda*	1946					2,330	2,330

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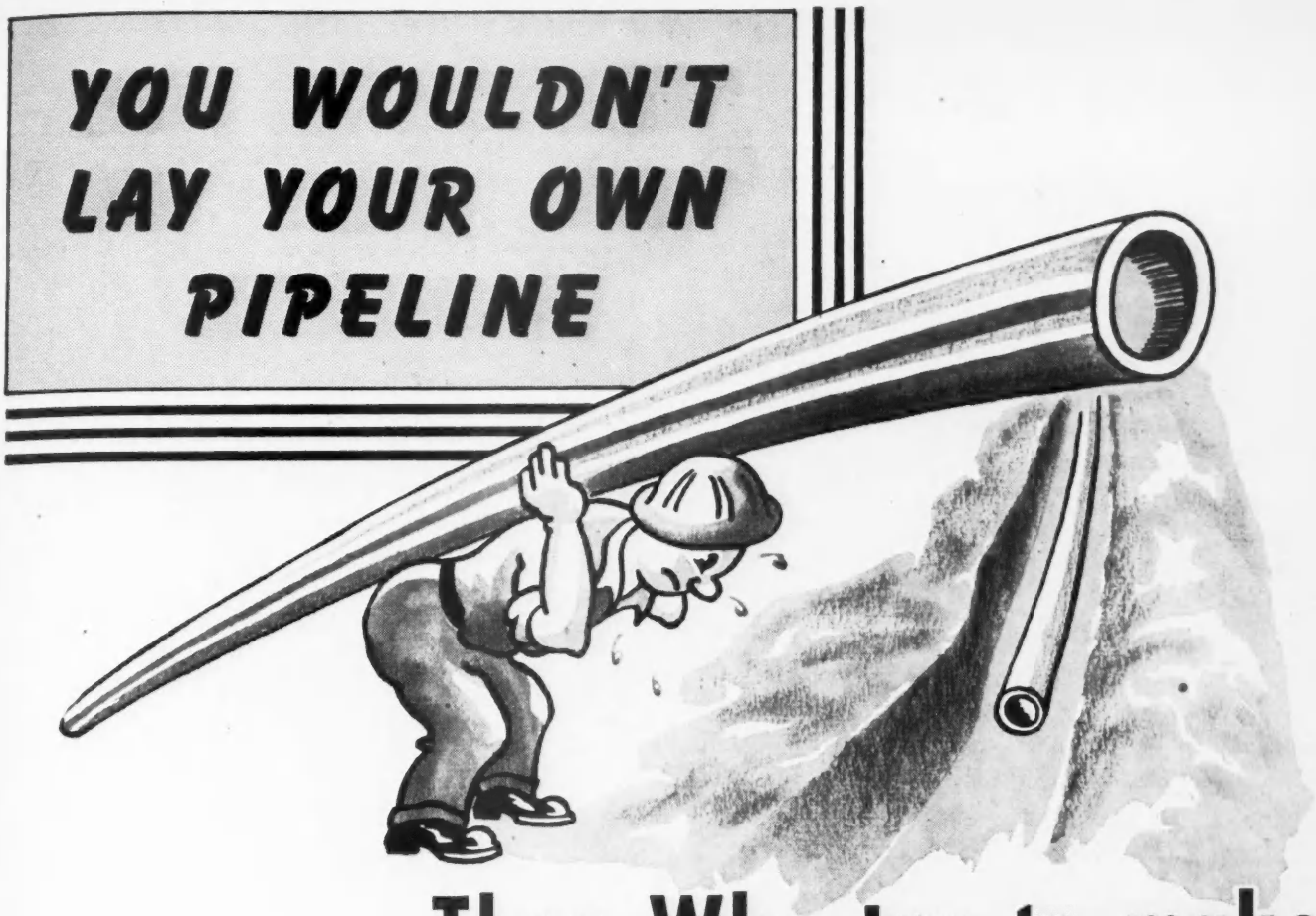

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PETROLEUM ELECTRIC POWER ASSOCIATION

Box 1498, Oklahoma City, Oklahoma

Field, *County*	Year of Discovery	Oil Producing Wells at End of 1946			Oil Production (Barrels)		
		Flowing	Art. Lift	Total	Daily at End of 1946	Year 1946	Cumulative Through 1946
Texas District 3—Continued							
Markham, N., Cornelius, *Matagorda*	1940	35	.....	35	2,250	1,037,439	4,649,838
Martha, *Liberty*	1939	1	9	10	300	144,236	1,126,982
Mayes, *Chambers*	1944	6	.....	6	225	102,129	260,421
Mayes, S., *Chambers*	1946	1	.....	1	30	9,593	9,593
McCoy, *Liberty*	1946	4	.....	4	500	56,480	56,480
McCrary, *Fort Bend*	1946	.....	.....	.....	.....	407	407
Mercy, *San Jacinto*	1942	28	8	36	2,400	945,124	4,119,729
Midfields, *Matagorda*	1946	4	.....	4	600	136,268	136,268
Moores (Orchard), *Fort Bend*	1926	1	4	5	125	43,105	3,837,208
Moss Bluff, *Liberty-Chambers*	1930	.....	.....	abn'd	.....	.....	179,000
Mykawa, Old, *Harris*	1929	.....	6	6	25	8,346	1,011,598
Mykawa, New, *Harris*	1930	.....	22	22	250	80,072	4,035,176
Nash Dome, *Fort Bend*	1926	2	.....	2	150	25,503	1,694,930
Needville, *Fort Bend*	1942	19	1	20	900	382,284	726,405
New Ulm, *Austin*	1945	1	.....	1	25	10,331	16,167
Nome, *Jefferson*	1936	3	32	35	650	297,993	4,729,762
North Dayton, *Liberty*	1905	.....	3	3	25	6,838	2,383,451
North Houston, *Harris*	1939	4	.....	4	140	54,880	390,294
Old Ocean, *Brazoria*	1934	140	2	142	14,750	6,075,393	23,700,393
Olive, *Hardin*	1946	3	.....	3	325	91,245	94,117
Orange, *Orange*	1913	.....	34	34	275	100,812	33,494,058
Orange, W., *Orange*	1937	4	24	28	475	218,528	4,263,924
Orange Hill, *Austin*	1944	.....	.....	abn'd	.....	.....	195
Orange Hill, W., *Colorado*	1945	.....	.....	abn'd	.....	.....	345
Oyster Bayou, *Chambers*	1941	21	1	22	5,800	2,045,559	7,801,430
Palacios, *Matagorda*	1937	1	.....	1	11	3,951	33,343
Pickett Ridge, *Wharton*	1935	13	29	42	1,200	513,302	5,450,531
Pierce Junction, *Harris*	1921	10	39	49	975	381,568	37,376,452
Pinehurst, *Montgomery*	1943	.....	.....	.....	25	15,223	127,115
Pledger, *Brazoria*	1932	.....	.....	abn'd	.....	.....	17,000
Port Neches, *Orange*	1929	5	17	22	750	296,608	6,469,872
Port Neches, N., *Orange*	1946	1	.....	1	150	10,319	10,319
Port Neches, W., *Orange*	1939	15	11	26	1,050	435,532	2,501,182
Raccoon Bend, Deep, (Cockfield), *Austin-Waller*	1934	30	50	80	5,600	2,449,353	17,921,677
Raccoon Bend, Shallow, *Austin-Waller*	1927	.....	75	75	1,000	370,879	20,035,925
Ramers Island, *Tyler*	1944	1	1	2	125	48,120	169,244
Red Fish Reef, *Chambers*	1940	17	.....	17	1,500	656,667	3,051,468
Richardson, Joyce, *Harris*	1944	7	.....	7	250	71,316	383,232
Rockland, Old, *Jasper*	1928	.....	.....	abn'd	.....	.....	43,704
Rockland, New, *Tyler*	1944	.....	.....	abn'd	.....	.....	454
Rosenburg, *Fort Bend*	1939	.....	.....	abn'd	.....	.....	24,832
Rosslyn, *Harris*	1938	1	.....	1	7	2,922	47,018
Rowan, *Brazoria*	1940	8	.....	8	650	249,244	1,313,003
Sabine Pass, *Jefferson*	1941	.....	.....	abn'd	.....	.....	10,218
Sabine Tram, *Newton*	1946	.....	.....	.....	.....	746	746
Sandy Point, *Brazoria*	1937	.....	.....	.....	50	21,479	421,695
Saratoga, *Hardin*	1901	4	201	205	900	246,986	30,819,754
Satsuma, *Harris*	1936	8	5	13	750	266,492	1,438,426
Schwab, Shallow, *Polk*	1934	.....	.....	abn'd	.....	.....	150,728
Schwab, Wilcox, *Polk*	1939	4	1	5	200	80,576	631,963
Seabreeze, *Chambers*	1936	17	.....	17	1,500	572,191	2,599,007
Segno, Deep, *Polk*	1938	21	52	73	1,900	837,152	7,805,649
Segno, Shallow, *Polk*	1936	21	16	37	1,250	419,909	4,304,471
Sheppards Mott, *Matagorda*	1936	.....	.....	abn'd	.....	.....	1,000
Sheridan, *Colorado*	1940	3	.....	3	85	37,186	328,330
Silsbee, *Hardin*	1936	33	12	45	2,500	1,077,140	6,565,937
Silsbee, W., *Hardin*	1941	3	1	4	160	34,640	162,538
Smith's Point, *Chambers*	1944	11	.....	11	1,850	657,564	1,073,273
Sour Lake, *Hardin*	1893	29	115	144	2,100	737,002	82,716,850
South Houston, *Harris*	1935	38	42	80	3,800	1,550,719	14,211,847
South Liberty, *Liberty*	1925	10	37	47	375	156,858	16,557,045
Spindletop, *Jefferson*	1901	4	112	116	500	214,470	128,215,936
Splendora, *Montgomery*	1934	.....	.....	abn'd	.....	.....	1,000
Spring, *Harris*	1944	6	.....	6	450	65,910	161,677
Spurger, *Tyler*	1940	.....	1	1	25	8,473	108,853
Stowell, *Jefferson*	1941	20	3	23	850	347,582	2,630,285
Stratton Ridge, *Brazoria*	1922	2	.....	2	75	32,086	46,333
Sublime, *Colorado*	1945	3	.....	3	115	36,580	71,995
Sugarland, *Fort Bend*	1928	23	19	42	4,000	1,715,676	40,292,523
Sugar Valley, *Matagorda*	1943	17	.....	17	2,300	271,577	271,577
Thompson, *Fort Bend*	1931	164	55	219	25,000	9,359,608	80,279,934
Thompson, N., *Fort Bend*	1939	51	.....	51	4,500	1,317,244	4,961,157
Thompson, S., *Fort Bend*	1939	78	5	83	6,850	2,419,955	13,166,057
Tide Haven, *Matagorda*	1946	1	.....	1	100	14,743	14,743
Tomball, *Harris-Montgomery*	1933	223	204	427	8,100	3,705,091	37,245,283
Turtle Bay, *Chambers*	1935	18	12	30	1,000	409,539	4,246,709
Turtle Bay, Lots Sand, *Chambers*	1939	.....	4	4	25	10,727	98,995
Turtle Bay, E., *Chambers*	1943	1	2	3	150	56,133	195,900
Village Mills, *Hardin*	1944	2	1	3	100	53,625	87,125
Webster, *Harris*	1937	189	18	207	48,500	19,258,117	84,363,697
West Columbia, Deep, *Brazoria*	1946	2	.....	2	250	21,515	21,515
West Columbia, Old, *Brazoria*	1902	12	31	43	1,975	715,631	86,718,134
West Columbia, New, *Brazoria*	1937	37	68	105	3,850	1,631,884	14,151,422
Willow Slough, *Chambers*	1938	6	.....	6	150	69,852	837,765
Willis, *Montgomery*	1945	.....	.....	.....	.....	.....	462
Winniw, *Jefferson*	1943	70	.....	70	9,400	4,349,431	15,832,940
Winnie, N., *Chambers*	1944	1	.....	1	400	166,217	240,477
Withers, N., *Wharton*	1940	108	47	155	6,000	3,720,072	16,267,581
Total Texas, Dist. 3	....	4,982	3,250	8,232	422,625	167,525,921	2,132,722,626

Field, *County*	Year of Discovery	Oil Producing Wells at End of 1946			Oil Production (Barrels)		
		Flowing	Art. Lift	Total	Daily at End of 1946	Year 1946	Cumulative Through 1946
Texas, District 4 (Lower Gulf-Laredo Dist.)							
Adami, *Webb*	1939	.....	52	52	125	50,208	734,107
Agua Dulce, *Nueces-Jim Wells*	1930	178	12	190	10,000	3,737,153	14,281,801
Agua Prieta, *Duval*	1941	13	.....	13	475	178,935	281,342
Alamo, *Hidalgo*	1942	.....	.....	abn'd	.....	.....	1,459
Albercas, *Webb*	1928	.....	.....	abn'd	.....	.....	2,547,611
Albercas, N., *Webb*	1946	.....	4	4	150	48,307	48,927
Alfred, *Jim Wells*	1938	10	7	17	325	134,487	1,119,640
Alice, *Jim Wells*	1938	19	26	45	1,050	462,828	4,631,951
Alta Mesa, *Brooks*	1936	1	37	38	1,250	502,250	2,811,032
Alta Verde, *Brooks*	1938	.....	.....	abn'd	.....	.....	6,667
Alworth, *Zapata-Jim Hogg*	1927	.....	.....	abn'd	.....	.....	27,000
Angelita, *San Patricio*	1934	.....	.....	abn'd	.....	.....	29,214
Aransas Pass, *Aransas-San Patricio*	1936	18	62	80	2,600	1,015,957	15,853,501
Armstrong, *Jim Hogg*	1943	22	8	30	875	355,511	908,138
Aviators, *Webb*	1922	.....	97	97	650	198,715	6,636,860
Baffins Bay, *Kleberg*	1940	.....	.....	abn'd	.....	.....	3,593
Baldwin (S. Saxet), *Nueces*	1935	4	17	21	600	183,207	1,472,379
Bandera, *Jim Wells*	1939	.....	.....	abn'd	.....	.....	1,532
Barbacoas, *Starr*	1943	.....	.....	abn'd	.....	.....	35,547
Benavides, (N. Sweden), *Duval*	1937	51	125	176	2,775	1,154,045	16,526,980
Benavides, E., *Duval*	1941	1	.....	1	58	22,612	90,746
Ben Bolt, *Jim Wells*	1939	38	22	60	1,425	573,719	4,613,580
Ben Bolt, 4500-ft. sand, *Jim Wells*	1941	.....	.....	abn'd	12	5,164	174,265
Bird Island, *Kleberg*	1939	1	.....	1	15	5,022	54,200
Blanchard, *Duval*	1939	.....	.....	abn'd	.....	.....	56,234
Blucher, *Jim Wells*	1939	10	.....	10	1,000	346,807	394,223
Borregas, *Kleberg*	1945	1	.....	1	.....	174	658
Boyle, *Starr*	1940	24	2	26	675	277,158	1,037,896
Brayton, *Nueces*	1944	20	1	21	850	312,571	536,597
Bridwell, *Duval*	1940	8	4	12	135	61,888	390,968
Brownlee, *Jim Wells*	1944	1	.....	1	2	824	9,552
Bruni, *Webb*	1934	1	3	4	22	8,560	2,479,156
Bruni, E., *Webb*	1937	.....	1	1	22	7,704	388,887
Bruni, S., *Webb*	1945	.....	4	4	9	4,437	11,250
Cadena, *Duval*	1942	15	5	20	525	223,068	663,018
Camada, *Jim Wells*	1939	.....	.....	abn'd	.....	.....	4,890
Cameron, *Starr*	1943	20	4	24	1,050	380,108	905,454
Captain Lucey, (Bentonville), *Jim Wells*	1936	2	4	6	55	26,198	617,357
Carolina-Texas, *Webb*	1921	.....	.....	abn'd	.....	.....	262,402
Casa Blanca, *Duval*	1938	.....	48	48	525	197,596	1,448,494
Casa Blanca, N., *Duval*	1939	.....	9	9	100	39,819	263,521
Casa Blanca, W., *Duval*	1940	.....	15	15	175	66,205	400,113
Cedro Hill, *Duval*	1939	5	70	75	880	349,615	1,967,356
Chapman Ranch, New, *Nueces*	1941	1	3	4	75	29,377	122,944
Chapman Ranch, Old, *Nueces*	1937	.....	.....	abn'd	.....	.....	41,511
Charamousca, *Duval*	1937	.....	18	18	173	62,627	900,500
Charamousca, S., *Duval*	1941	.....	13	13	95	40,673	281,021
Charco Redondo, *Zapata*	1919	1	28	29	3	1,429	165,918
Charco Redondo, E., *Zapata*	1946	.....	3	3	75	2,325	2,325
Chiltipin, *Duval*	1939	4	.....	4	2	876	61,201
Clara (Bruce), *Duval*	1943	.....	1	1	5	1,684	6,654
Clara Driscoll, *Nueces*	1935	4	14	18	475	173,922	1,939,332
Clara Driscoll, S., *Nueces*	1937	23	54	77	1,275	551,994	6,253,142
Clark-Muile, *Jim Wells*	1939	.....	.....	abn'd	.....	.....	49,819
Cole, *Webb-Duval*	1924	.....	67	67	300	109,554	5,307,043
Colmena, *Duval*	1936	.....	17	17	75	30,991	689,657
Colorado, *Jim Hogg*	1936	160	84	244	4,000	872,873	5,296,051
Comitas, *Zapata*	1934	.....	132	132	175	67,170	2,012,979
Conoco-Driscoll, *Duval*	1927	40	22	62	2,272	909,070	8,787,138
Corpus Christi, *Nueces*	.....	.....	.....	abn'd	.....	.....	6,763,621
Cuellar, *Zapata*	1928	.....	16	16	25	9,151	2,675,551
Dan Sullivan, *Brooks*	1944	1	.....	1	1	254	4,758
Dougherty, *Nueces*	1944	.....	.....	.....	.....	685	9,482
Dulup, *Webb*	1943	.....	14	14	275	97,238	316,134
Eagle Hill, *Duval*	1933	.....	50	50	375	155,364	2,440,470
East, *Jim Hogg*	1942	11	.....	11	175	71,021	231,361
El Tanque, (S. Ricaby), *Starr*	1937	.....	12	12	25	12,687	479,654
Escobas, *Zapata*	1929	.....	205	205	500	185,041	8,668,463
Fitzsimmons, *Duval*	1938	24	40	64	600	266,673	3,734,728
Fitzsimmons, E., *Duval*	1940	.....	.....	abn'd	.....	.....	485
Flores, *Starr*	1945	.....	1	1	5	3,264	6,879
Flour Bluff, *Nueces*	1936	39	28	67	1,675	893,505	10,955,601
Flour Bluff, E., *Nueces*	1940	19	.....	19	850	363,910	1,817,827
Frost, *Starr*	1942	1	1	2	3	1,047	8,533
Gallagher, *Jim Wells*	1940	5	.....	5	135	51,248	279,187
Gandy (Driscoll Ranch), *Nueces*	1939	3	6	9	100	40,490	505,929
Garcia, *Starr*	1942	82	3	85	3,775	1,359,310	2,894,279
Glenn, *Webb-Zapata*	1940	3	52	55	650	252,960	2,268,629
Gormac, *Duval*	1945	3	6	9	215	92,429	162,545
Government Wells, N., 1800-ft. sd, *Duval*	1942	1	8	9	3,975	1,503,092	37,603,100
Government Wells, N., Middle Yegua, *Duval*	1941	.....	2	2	20	8,508	58,615
Government Wells, N., *Duval*	1928	5	371	376	100	38,471	129,901
Government Wells, S., *Duval*	1928	15	193	208	1,550	589,575	21,289,387
Gregory, *Live Oak*	1944	.....	.....	abn'd	.....	386	13,731
Guerra (Cuevitas), *Starr*	1933	6	5	11	475	180,516	2,026,126
Gyp Hill (Loma Blanca), *Brooks*	1945	2	.....	2	30	8,843	8,843
Halderman (Seelig), *Jim Wells*	1941	1	1	2	20	8,080	62,761

Field, County	Year of Discovery	Oil Producing Wells at End of 1946			Oil Production (Barrels)		
		Flowing	Art. Lift	Total	Daily at End of 1946	Year 1946	Cumulative Through 1946
Texas, District 4—Continued							
Henne-Winch-Farris, *Jim Wells*	1924			abn'd			3,215,204
Henshaw, 3700-ft & 5100-ft. *Jim Wells*	1940	1	1	2	45	18,145	112,673
Herbst, *Duval*	1944		3	3	75	25,033	35,239
Hoffman, *Duval*	1935		300	300	2,775	1,110,224	14,425,064
Holbein, *Jim Wells*	1940		9	9	35	12,804	158,490
Holland-Hebbronville, *Jim Hogg*	1940	2		2	50	10,641	11,989
Howell, *Jim Wells*	1944			abn'd			64,476
Hughes, *Webb*	1946		3	3	100	10,045	10,045
Ira (Zim), *Starr*	1945	1		1	10	3,960	6,940
Jennings, *Zapata*	1932		75	75	525	203,910	3,507,229
Kelsey, *Jim Hogg*	1938	71	13	84	1,675	740,097	5,054,910
Kelsey, Deep Zone, *Jim Hogg*		38	2	40	2,000	666,048	950,720
Killam, *Webb*	1937		67	67	175	67,123	1,505,031
Killam, N., *Webb*	1938		3	3	10	4,421	109,940
Kingsville, *Kleberg*	1926	2	1	3	40	14,229	805,777
Kohler, *Duval*	1926		9	9	70	22,089	742,931
Koopman, *Jim Wells*	1942		1	1	5	1,887	37,124
Kreis, *Duval*	1941		10	10	90	33,505	237,398
Labbe, *Duval*	1937		9	9	85	33,860	589,421
La Gloria, *Jim Wells*	1939	33	1	34	1,900	694,071	997,537
Lamar, *Aransas*	1937			abn'd			1,092
La Reforma, *Starr*	1938	2		2	65	17,795	33,958
La Sal Vieja, *Willacy*	1936						15,000
Las Animas, *Jim Hogg*	1938		6	6	25	8,643	104,563
Las Mujeres, *Jim Hogg*	1944				2	646	3,342
Lafevre, *Jim Hogg*	1945		2	2	10	3,703	4,469
Laurel, *Webb*	1932			abn'd			630,632
Lockhart, *Starr*	1943	8	4	12	275	98,897	402,513
Loma Novia, *Duval*	1934	1	446	447	2,900	1,011,601	31,843,687
Loma Vista, *Duval*	1936			abn'd			19,999
London, *Nueces*	1937		3	3	40	15,885	160,085
Longhorn, *Duval*	1938	10	24	34	800	311,180	3,237,791
Longhorn, E., *Duval*	1945	10		10	650	286,401	477,666
Lopez, *Duval*	1935		288	288	1,800	705,926	15,770,522
Los Indios, *Hidalgo*	1944			abn'd			4,146
Los Olmos, *Starr*	1925		70	70	50	18,061	695,902
Luby, *Nueces*	1937	121	10	131	2,500	1,015,508	12,789,572
Lundell, *Duval*	1937	20	67	87	925	371,158	2,894,265
Lykes, *Webb*	1942			abn'd			2,139
McLean, *Webb*	1942		9	9	250	81,259	349,999
Magnolia City, *Jim Wells*	1939	2	3	5	125	82,936	500,319
Magnolia City, N., *Jim Wells*	1943	27	2	29	1,213	610,319	1,497,161
Magnolia City, W., *Jim Wells*	1946	1		1	12	3,577	3,577
Manila, *Jim Hogg*	1940		10	10	75	30,536	387,306
Mariposa, *Brooks*	1945	3	1	4	75	39,729	44,074
Mathis, E., *San Patricio-Live Oak*	1940			abn'd			14,391
Midway, *San Patricio*	1937	31	41	72	3,000	1,104,406	7,067,419
Minnie Bock, *Nueces*	1939	9	55	64	1,600	599,223	4,459,817
Minnie Bock, N., *Nueces*	1946	5		5	425	77,917	77,917
Mirando City, *Webb*	1922		38	38	190	72,428	9,638,209
Mirando Valley, *Zapata*	1921		18	18	25	6,988	1,596,016
Moca, *Webb*	1932	4	7	11	100	39,307	1,371,403
Monte Negra, *Kleberg*	1945	1		1		25,582	27,714
Neuhaus, *Jim Hogg*	1942	3	3	6	35	14,746	84,071
Nichols, *Hidalgo*	1941	4	3	7	110	44,563	506,808
Odem, *San Patricio*	1940	67	3	70	1,700	693,371	3,247,090
Odem, N., *San Patricio*	1944			abn'd		183	4,338
O'Hern, *Duval-Webb*	1936		141	141	1,300	497,686	12,945,761
Oilton, *Webb*	1937		32	32	110	38,016	1,853,377
Orange Grove, *Jim Wells*	1940	19	4	23	750	296,997	2,760,807
Planagana, *Duval*	1928			abn'd			4,000
Penitas, *Hidalgo*	1944			abn'd			344
Peters, *Duval*	1933	1	3	4	30	11,006	304,915
Peters, E., *Duval*	1940	1	2	3	20	7,817	58,173
Petronilla, *Nueces*	1942	15	2	17	400	165,459	750,081
Piedra Lumbre, *Duval*	1935		123	123	1,600	605,329	6,293,125
Piedras Pintas, *Duval*	1925	22		22	1,450	302,589	450,396
Pita, *Brooks*	1945	3		3	275	54,339	54,339
Plymouth, *San Patricio*	1935	154	26	180	8,825	3,186,479	39,082,119
Premont, *Jim Wells*	1933	1	1	2	30	11,211	852,952
Premont Prospect, *Jim Wells*	1941		2	2	20	7,421	47,380
Quinto Creek, *Jim Wells*	1942	1	1	2	94	37,590	147,113
Rachal, *Brooks*	1945	1		1	10	7,196	7,196
Rancho Solo, *Duval*	1937		19	19	45	17,534	363,007
Rancho Solo Extension, *Duval*	1940	2	12	14	45	16,595	244,052
Randado, *Jim Hogg*	1925		83	83	170	59,671	5,104,518
Raymondville, *Willacy*	1931	2		2	30	13,499	23,213
Reynolds, *Jim Wells*	1939	11	9	20	415	158,510	1,803,890
Ricaby, *Starr*	1937		9	9	40	23,478	232,218
Ricardo, *Kleberg*	1945	2		2	40	17,682	52,786
Richard King, *Nueces*	1937	4	82	86	2,900	1,056,955	6,360,201
Richardson, *Duval*	1944		4	4	30	11,999	21,169
Rincon, *Starr*	1938	135	23	158	6,050	2,326,609	13,441,411
Rincon, N., *Starr*	1939	28	16	44	1,425	577,630	1,528,161
Rio Grande City, *Starr*	1932		9	9	20	9,170	480,933
Rios, *Duval*	1944			abn'd			84
Riverside, *Nueces*	1939	13		13	475	161,602	455,495
Robinson, *Duval*	1944	9		9	400	134,081	181,156
Robstown, *Nueces*	1939	2	1	3	20	9,412	195,540
Rodriguez, *Starr*	1941			abn'd			40
Roma, *Starr*	1928			abn'd			17,308
Rooke, *Refugio*	1942	15		15	200	223,820	785,444
Rosalia, *Duval*		1		1	28	13,189	13,189
Rosita, *Duval*	1944		3	3	40	13,329	89,913
Ross, *Starr*	1943	13	29	42	1,075	408,573	959,467
S. R. C., *Duval*	1930			abn'd			203,000
Sam Fordyce, *Starr-Hidalgo*	1934	1	24	25	175	63,212	7,784,596
Santa Elena			2	2	74	34,461	70,953
Sandia, *Jim Wells*	1937		2	2			22,579
Sarnosa, *Duval*	1932		33	33	225	81,168	3,037,619
Saxet, *Nueces*	1930	14	118	132	2,775	1,034,680	34,298,335
Saxet, Deep, *Nueces*	1936	20		20	2,250	529,182	540,401
Saxet, Frio, *Nueces*		6	30	36	1,975	670,180	25,324,710
Scott & Hooper, *Brooks*	1944	8		8	200	83,622	237,482
Seeligson, *Jim Wells*	1938	551	5	556	33,000	12,870,857	33,189,582
Sejita, *Duval*	1940	37	1	38	1,200	471,862	1,467,518
Seven Sisters, *Duval*	1935	2	382	384	6,050	2,243,606	26,523,575
Seven Sisters, S., *Duval*	1937		15	15	50	23,782	806,892
Shield, *Nueces*	1940	7	3	10	525	147,308	775,501
Sinton, W., *San Patricio*	1944	2		2	80	6,807	12,379
Southland, *Duval*	1939	14	4	18	775	250,804	645,899
Staggs, *Webb*	1945		2	2	25	10,748	19,695
St. Charles, *Aransas*	1940			abn'd			51,200
Strake, *Duval*	1943	1	6	7	400	140,750	376,023
Stratton, *Nueces*	1938	243	3	246	6,100	3,508,400	14,820,409
Sullivan City, *Hidalgo*	1940	19		19	350	146,228	1,116,261
Sun, *Starr*	1938	71	5	76	2,800	1,100,748	5,351,731
Sun, N., *Starr*	1942	31	1	32	1,401	460,584	1,775,672
Sweden, *Duval*	1937	1	2	3	35	14,198	314,336
Taft, *San Patricio*	1936	35	40	75	2,150	857,712	8,832,177
Taft, E., *San Patricio*	1946	1		1	30	3,156	3,156
Taranchuas, *Duval*	1940		27	27	553	201,815	1,200,053
Tesoro (De Soto), *Duval*	1938	1		1	19	6,786	249,056
Thomas Lockhart, *Duval*	1937	8	1	9	135	56,321	173,401
Tijerina-Canales, *Jim Wells-Kleberg*	1944	111		111	6,550	2,248,709	3,524,358
Tom Graham (E. Alice), *Jim Wells*	1938	33		33	835	322,979	2,902,088
Turkey Creek, (W. Saxet), *Nueces*	1938	33	10	43	1,225	467,270	6,197,682
Volpe, *Webb*	1939		26	26	525	190,510	1,106,354
Wade City, *Jim Wells*	1939	28	42	70	1,675	649,153	6,238,417
Weil, *Jim Hogg*	1943	2	4	6	225	83,592	258,528
Welder, *Duval*	1944		4	4	40	17,087	41,730
White Point, *San Patricio*	1919		1	1	40	16,548	237,068
White Point, E., *San Patricio*	1938	212	29	241	10,000	3,795,084	27,825,982
Willamar, *Willacy*	1940	192	3	195	13,300	4,706,774	9,027,906
Willmann, *San Patricio*	1945	10		10	425	192,476	293,563
Yeager, *Jim Hogg*	1943		4	4	15	10,958	126,298
Uturria, *Starr*	1941	17		17	625	234,707	706,928
Yzaguirre, *Starr*	1940			abn'd			5,362
Total, Texas, Dist. 4	....	3,560	5,194	8,754	208,800	79,481,028	680,292,851
Texas, District 5 (East Central Texas)							
Angus, *Navarro*	1946		1	1	10	1,799	1,799
Bazette, *Navarro*	1939	1	3	4	75	13,845	318,761
Bolivar, *Denton*	1937		1	1	2	663	18,311
Buffalo, *Leon*	1933						20,133
Calvert, *Robertson*	1944		19	19	825	223,683	293,664
Campbell, *Hunt*	1943		2	2	100	36,627	178,232
Cedar Creek, *Limestone*	1927			abn'd			197,797
Collinsville, *Grayson*	1938		1	1	3	729	40,983
Corsicana, Shallow, *Navarro*	1895		590	590	300	119,533	17,341,019
Currie, *Navarro*	1921	1	11	12	70	26,018	7,042,011
Flag Lake, *Henderson*	1937		6	6	35	15,066	611,765
Fruitvale, *Van Zandt*	1944		2	2	66	22,996	57,015
Groesbeck, *Limestone*	1942			abn'd			3,850
Groesbeck, Glenrose, *Limestone*	1944		1	1	2	357	2,015
Handy, *Grayson*	1946	1		1	35	5,345	5,345
Kosse, *Limestone*							43,735
La Rue, *Henderson*	1945	1		1	180	64,502	113,106
Lott, *Falls*	1937		1	1	10	692	32,932
Mabank, *Henderson*	1939			abn'd			83,672
Mexia, *Limestone*	1916		159	159	1,250	467,262	100,409,478
Mt. Calm, *Hill*							101,150
Myrtle Springs, *Van Zandt*	1944		2	2	25	9,316	19,032
Nigger Creek, *Limestone*	1927			abn'd			3,012,093
Opelika, *Henderson*	1937			abn'd			16,477
Opelika, Rodessa, *Henderson*	1946	3	1	4	650	101,309	101,309
Pickton, *Hopkins*	1944	28	1	29	1,150	630,405	983,812
Post Oak, *Falls*	1937			abn'd			57,956
Pottsboro, *Grayson*	1930			abn'd		140	10,209
Powell, *Navarro*	1900		131	131	1,200	440,186	117,737,885
Rice, *Navarro*	1938			abn'd			340
Richland, *Navarro*	1924		4	4	31	9,581	6,717,998
Rowe & Baker (Mohawk), *Henderson*							83,672
Sadler, *Grayson*	1944	1		1			448
Satin, *Falls*	1938			abn'd			22,703
South Bosque, *McLennan*	1902		28	28	6	2,272	121,719
Sulphur Bluff, *Hopkins*	1936		67	67	3,350	1,250,289	15,047,603
Tehuacana, *Limestone*			3	3	15	5,134	58,495
Tundra, *Van Zandt*	1945		1	1	10	2,863	5,606
Van, *Van Zandt*	1929	259	300	559	24,500	10,665,194	172,486,375
Van, Shallow, *Van Zandt*	1933		28	28	75	25,173	416,404
Wieland, *Hunt*	1942		8	8	435	163,146	624,645
Wortham, *Freestone-Limestone*	1916		25	25	200	73,049	23,343,218
Wortham, Shallow, *Freestone-Limestone*	1916		2	2	5	1,333	1,333
Total, Texas, Dist. 5	....	295	1,398	1,693	34,615	14,378,507	467,886,105

Field, County	Year of Discovery	Oil Producing Wells at End of 1946			Oil Production (Barrels)		
		Flowing	Art. Lift	Total	Daily at End of 1946	Year 1946	Cumulative Through 1946
Texas, District 6 (Northeast Texas)							
Beulah, *Angelina*	1938			abn'd			1,280
Boggy Creek, *Anderson-Cherokee*	1927		10	10	100	39,201	5,306,701
Camp Hill, *Anderson*	1935			abn'd			293,374
Carthage, *Panola*	1944	7		7	400	83,520	96,593
Cayuga, *Anderson-Henderson*	1934	56	160	216	6,500	2,428,162	37,047,659
Cayuga, Trinity, *Anderson*	1939	1		1	13	5,317	42,795
Chapel Hill, *Smith*	1940	43	8	51	810	335,033	2,765,071
Coke, *Wood*	1942	15	13	28	2,200	818,483	3,036,855
Concord, *Anderson*	1942			abn'd			15,587
East Texas Field, *Rusk, Gregg, Upshur, Smith, Cherokee*	1930	13,928	9,153	23,081	316,000	120,581,132	2,357,466,899
Eylau, *Bowie*	1944	1		1	50	18,407	51,780
Ginther, *Angelina*	1937	3	1	4	15	4,835	56,553
Grapeland, *Houston*	1936						138,300
Hawkins, *Wood*	1940	521	49	570	39,200	14,785,931	61,687,852
Henderson, *Rusk*	1943	17		17	650	242,740	460,973
Huntington, *Angelina*	1938		1	1	3	1,210	17,542
Kildare, *Cass*	1942	16	16	32	445	178,488	1,791,528
Larissa, *Cherokee*	1942	1		1	20	8,017	40,155
Lassater, *Marion*	1946		1	1	10	5,100	5,100
Lone Star, *Cherokee*	1938		9	9	515	180,283	407,142
Long Lake, *Anderson*	1933	90	53	143	4,250	1,722,278	12,303,258
Long Lake, E., *Anderson*	1941	12	7	19	772	298,271	1,096,260
Manziel, *Wood*	1943	19	15	34	1,875	582,494	1,664,015
Manziel, Woodbine, *Wood*	1946	1		1	50	6,922	6,922
Marion Co., Shallow, *Marion*	1910	4	48	52	400	88,033	521,463
Merigale, *Wood*	1944	16	4	20	1,150	325,283	380,435
Mt. Sylvan, *Smith*	1946	2		2	300	48,873	48,873
Nacogdoches, *Nacogdoches*	1865					205	495,552
Navarro Crossing, *Houston*	1938	12	7	19	200	81,153	1,086,735
New Hope, *Franklin*	1943	40	33	73	3,050	1,217,807	3,990,897
Norman Paul, *Wood*	1946		1	1	120	14,520	14,520
Panola (Bethany), *Panola*	1938		4	4	17	6,007	88,389
Percilla, *Houston*	1937			abn'd			30,380
Pickering (Ashton), *Shelby*	1942			abn'd			1,004
Pittsburgh, *Camp*	1940		25	25	650	324,248	1,398,926
Pleasant Grove, *Rusk*	1941	1	5	6	200	79,910	376,626
Pleasant Grove, Shallow, *Rusk*	1942		1	1	5	2,448	28,145
Potter, *Marion*	1911		24	24	50	18,487	3,149,424
Quitman, *Wood*	1944	61	11	72	5,800	2,328,301	7,212,052
Redland (Davisville), *Angelina*	1939			abn'd			60
Rodessa, *Cass*	1935	43	205	248	2,650	1,128,207	57,240,117
Rusk, *Cherokee*	1934			abn'd			268,264
Sam Houston	1946		2	2	25	3,730	3,730
Sand Flat, *Smith*	1944	3	22	25	1,150	340,351	542,638
Shelbyville, *Shelby*	1917		1	1	5	1,696	15,343
Tacoma, *Panola*	1934			abn'd			20,220
Talco, *Titus-Franklin*	1936	7	715	722	24,000	8,741,243	92,985,390
Trinity (Kittrell), *Houston*	1946		16	16	350	140,055	2,466,192
Tyler, S., *Smith*	1944	3		3	425	126,324	242,306
Waskom, *Harrison*	1938	5	12	17	325	74,676	224,381
William Wise, *Cherokee*	1946	2		2	150	18,570	18,570
Willow Springs, *Gregg*	1938						2,065
Winnsboro, *Wood*	1944	9	4	13	475	283,909	561,971
Total, Texas, Dist. 6		14,939	10,636	25,575	415,375	157,719,860	2,659,214,862
Texas, District 7-B (North Central Texas)							
Brown County	1902	3	744	747	850	310,096	32,757,658
Callahan County	1916	4	1,017	1,021	500	193,909	16,014,393
Coleman County	1902	145	333	478	2,925	1,175,013	16,030,385
Comanche County	1919		92	92	125	50,808	2,064,779
Eastland-Erath Counties	1917	32	363	395	2,350	776,118	102,610,749
Fisher County	1928	1	127	128	925	322,750	14,974,747
Haskell County	1929	8	8	16	375	69,626	324,186
Jones County	1926	258	656	914	13,000	4,554,913	37,529,415
Nolan County	1939			abn'd			3,243
Palo Pinto County	1902	4	46	50	175	78,548	5,489,449
Shackelford County	1910	33	2,003	2,036	4,350	1,582,944	51,080,384
Stephens County	1916	71	554	625	4,500	1,444,646	135,370,715
Stonewall County	1936		5	5	50	23,558	278,739
Taylor County	1929	82	69	151	2,975	1,001,758	2,957,140
Throckmorton County	1924	10	295	305	1,400	418,016	4,994,177
Wise County	1942			abn'd			1,463
Total, Texas, Dist. 7-B		651	6,312	6,963	34,500	12,002,703	422,571,622
Texas, District 7-C (West Texas)							
Barnhart, *Regan*	1941	36	4	40	3,600	1,549,154	4,473,046
Bean, *Crockett*	1941			abn'd			3,864
Big Lake, *Reagan*	1923	5	187	192	3,400	1,271,805	106,631,557
Blackwell, *Coke*	1923					1,604	9,385
Bolt, *Kimble*	1940	1	1	2	1	236	465
Clara Couch, *Crockett*	1941	1	19	20	350	131,797	321,960
Concho County, Miscl.							2,315
Crockett, (S. McCamey), *Crockett*	1938	5	40	45	200	92,517	744,182
Eden, *Concho*	1945		2	2	70	18,971	19,346
Funk, *Tom Green*	1940						4,411

Field, County	Year of Discovery	Oil Producing Wells at End of 1946			Oil Production (Barrels)		
		Flowing	Art. Lift	Total	Daily at End of 1946	Year 1946	Cumulative Through 1946
Texas, District 7-C—Cont.							
Grayson (Skelly-Grayson), *Reagan*	1928		6	6	65	27,531	786,521
Grierson Springs, *Reagan*	1944			abn'd			1,537
Herrington, *Upton-Crane*	1938			abn'd			103,803
Hoover, *Crockett*	1941			abn'd			10,425
Hurdle, *Upton-Crane*	1936		12	12	25	9,079	284,276
Irion (Mertzon), *Irion*	1929		5	5	34	8,749	156,752
Live Oak, *Crockett*	1941		1	1	1	859	7,129
McCamey, *Upton-Crane*	1925	3	855	858	8,200	3,280,686	67,587,258
McCulloch County, Miscl.	1935			abn'd			2,000
Melvin, *McCulloch*	1942			abn'd			223
Morrow, *Menard*	1946		1	1	14	1,016	1,016
Noelke, *Crockett*	1940	13	32	45	500	233,102	1,153,452
Olson, *Crockett*	1941	2	23	25	225	72,864	199,738
Opp (El Dorado), *Schleicher*	1939			abn'd			3,142
Page, *Schleicher*	1937	4		4	350	47,653	206,265
Runnels County, Miscl.		7	5	12	90	35,883	1,245,976
Shannon, *Crockett*	1943	7		7			2,994
Tankersly, *Irion*	1945	1		1	50	19,298	32,229
Tood, Deep, *Crockett*	1940	66	4	70	8,500	2,419,603	3,588,875
Upland, *Upton*	1945		1	1		226	872
Webb-Ray, *Upton-Crane*	1935		1	1	5	2,822	64,552
World, *Crockett*	1925		98	98	2,000	715,131	10,605,298
Wyatt (Todd), *Crockett*	1932	1		1	20	7,477	60,365
Total, Texas, Dist 7-C		152	1,297	1,449	27,700	9,948,063	198,315,229
Texas District 8 (West Texas)							
Abell, *Pecos*	1940	65	5	70	1,550	697,998	4,486,998
Abell, Permian, *Pecos*	1941	7	13	20	275	111,837	567,761
Alex, *Terry*	1945		4	4	125	23,341	23,520
Andector, *Ector*	1946	1		1	100	11,439	11,439
Anthony (Toyah), *Reeves*	1939			abn'd			2,201
Apco-Warner, *Pecos*	1939	41	5	46	1,925	739,758	2,712,659
Barstow, *Crane*	1946					555	555
Bedford, Devonian, *Andrews*	1945	2		2	350	101,019	110,184
Bedford, Ellenburger, *Andrews*	1945	2		2	475	137,053	139,593
Block 12, *Andrews*	1945	4		4	300	29,033	29,033
Block 31, Devonian, *Crane*	1945	17	3	20	2,850	572,424	584,408
Block 31, Ellenburger, *Crane*	1946	9		9	1,200	288,509	300,711
Brahaney, *Yoakum*	1945		1	1	15	5,840	8,673
Byrd, *Ward*	1942	7		7	50	25,463	155,634
Carter, *Glasscock*	1937			abn'd			30,772
Cedar Lake, *Gaines*	1939		54	54	1,625	688,653	3,250,887
Chancellor, *Pecos*	1942		2	2	25	12,533	93,212
Clabber Hill, *Andrews*	1943		2	2	50	31,003	94,413
Coble, *Hockley*	1946		1	1	5	1,542	1,592
Coleman Ranch, *Mitchell*	1946		1	1	50	4,173	4,173
Cowden-Crane, *Crane-Upton*	1925	2	84	86	300	108,208	5,946,444
Cowden, N., *Ector*	1930	316	323	639	21,000	9,668,486	56,833,569
Cowden, N., Deep, *Ector*	1939	14	8	22	2,300	429,704	750,177
Cowden, S., *Ector*	1933	53	80	133	2,700	1,153,988	7,609,869
Cravens, *Lubbock*	1945		1	1			4,055
Crossett, *Crane*	1944	10		10	300	109,811	294,030
Crossett, 3200-ft., *Crane*	1945	1		1	10	3,851	13,917
Dean, *Cochran*	1938	6	19	25	700	266,091	712,449
Deep Rock, *Andrews*	1933	2	11	13	100	40,181	862,299
Dobbs, *Ward*	1936		1	1	5	1,614	27,067
Dollar Hide, *Andrews*	1945	5		5	600	140,351	152,444
Doss (Eubanks), *Gaines*	1944	5	4	9	325	125,178	172,392
Duoro, *Ector*	1941			abn'd			552
Dune, (N. Church & Fields), *Crane*	1938	5	27	32	600	225,417	1,361,028
Eaves, *Winkler*	1936	7	17	24	1,350	538,688	2,608,968
Edwards, *Crane*	1935	21	10	31	500	178,036	670,959
Embar, Ellenburger, *Andrews*	1942	24		24	4,000	1,352,964	4,039,791
Embar, Permian, *Andrews*	1942	11	3	14	600	246,199	1,078,209
Emma, *Ector*	1937	4	71	75	1,900	858,284	4,369,344
Emperor, Shallow, *Winkler*	1935	64	21	85	1,500	428,664	4,178,816
Emperor, Deep, *Winkler*	1935	26	17	43	225	91,338	1,330,693
Emperor, Holt, *Winkler*	1946	4		4	275	51,859	51,859
Fairview, *Howard*	1945						363
Ft. Stockton, *Pecos*	1944	29	9	38	750	305,258	423,374
Foster, *Ector*	1936	141	464	605	17,000	6,343,528	36,923,619
Fromme, *Pecos*	1939	4	5	9	25	10,711	142,174
Fuhrman-Mascho, *Andrews*	1930		141	141	3,650	1,513,173	8,237,984
Fuhrman-Mascho, Ellenburger, *Andrews*	1946		1	1	25	775	775
Fullerton, *Andrews*	1942	407	11	418	23,700	9,674,934	19,798,057
Fullerton, Ellenburger, *Andrews*	1946	3		3	600	184,256	192,488
Fullerton, 8500-ft., *Andrews*	1944	38	1	39	3,500	1,065,791	1,379,291
Fullerton, San Andres, *Andrews*	1945		1	1	15	5,055	7,663
Garden City, *Glasscock*	1946				25	3,492	3,492
Glasscock, Wildcat, *Glasscock*							491
Garza (Post City), *Garza*	1937	6	102	108	3,800	1,164,587	1,385,370
Goldsmith, *Ector*	1935	903	90	993	20,700	8,671,176	72,658,457
Goldsmith, Clear Fork, *Ector*	1946	3		3	400	59,435	59,435
Goldsmith, Devonian, *Ector*	1946	3		3	400	73,805	73,805
Goldsmith, N., *Ector*	1940	7	3	10	60	21,227	196,628
Goldsmith, Silurian, *Ector*	1946				150	8,143	8,143
Grassroots, *Pecos*	1940			abn'd			442

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INSURANCE COMPANY

HOME OFFICE HOUSTON 1, TEXAS

Field, County	Year of Discovery	Oil Producing Wells at End of 1946			Oil Production (Barrels)		
		Flowing	Art. Lift	Total	Daily at End of 1946	Year 1946	Cumulative Through 1946
TEXAS, DISTRICT 8—Cont.							
Halley (Skelly-Halley), *Winkler*	1934	22	28	50	750	243,698	1,745,517
Harper, *Ector*	1933	11	173	184	1,000	393,407	9,957,851
Heiner, *Pecos*	1941	2		2	25	7,266	39,238
Henderson, *Winkler*	1936	45	33	78	1,600	665,788	11,772,385
Hendricks, *Winkler*	1926	31	198	229	3,700	1,393,081	210,994,021
Howard-Glasscock Field, *Howard-Glasscock*	1926		894	894	14,000	4,992,694	123,760,279
Hunt, *Winkler*	1946					3,163	3,163
Iatan-East Howard, *Howard-Glasscock*	1921	4	385	389	3,750	1,407,846	22,078,577
Iatan, N., *Howard*	1943		14	14	200	72,387	286,862
Jamison & Pollard, *Pecos*	1941	2	1	3	125	45,553	143,184
Johnson, *Ector*	1935	52	77	129	2,400	1,055,195	6,489,091
Jones Ranch, *Gaines*	1945	3		3	625	184,222	202,735
Jordan, *Crane*	1937	136	86	222	5,350	2,322,357	14,396,769
Justiceburg, *Garza*	1937			abn'd			16,416
Kermit, *Winkler*	1926	80	551	631	2,475	888,676	33,591,425
Kermit, Ellenburger, *Winkler*	1943	2		2	175	81,206	320,000
Keystone, Colby, *Winkler*	1935	205	95	300	2,900	1,264,106	15,836,896
Keystone, Devonian, *Winkler*	1946	4		4	700	105,161	105,161
Keystone, Ellenburger, *Winkler*	1943	118		118	37,000	12,987,236	18,075,100
Keystone, Holt, *Winkler*	1943	47	5	52	4,000	1,002,810	1,640,021
Keystone, Lime, *Winkler*	1946	53	58	111	875	380,192	780,158
Keystone, Silurian, *Winkler*	1945	1		1	100	14,700	20,557
Landon (Slaughter, W.), *Cochran*	1945	2		2	175	59,304	70,744
Leck, *Winkler*	1928	3	12	15	700	248,062	4,640,190
Lehn-Apco Warner, 1600-ft., *Pecos*	1939	26	49	75	300	94,498	743,762
Levelland, *Hockley*	1945	8	9	17	375	68,120	86,577
Lion, *Lubbock*	1944	2		2	20	8,139	26,455
Lowe, *Andrews*	1946	1		1	100	9,264	9,264
Lubbock, *Lubbock*	1944		1	1			10,181
McElroy, *Crane-Upton*	1926	125	543	668	27,000	9,784,392	164,548,425
McKee, *Crane*	1942		3	3	25	11,378	115,625
Mabee, *Andrews*	1944		73	73	2,500	1,031,986	2,420,977
MacDer, *Pecos*	1946	1		1		1,399	2,184
Magnolia-Sealy, *Ward*	1939		51	51	250	103,256	1,586,433
Magnolia-Sealy, S., *Ward*	1940	13	7	20	500	204,595	1,183,960
Martin, *Andrews*	1945	2	1	3	200	99,015	138,268
Martin, Ellenburger, *Andrews*	1946	4		4	950	167,169	167,169
Mason, *Loving*	1937	3	5	8	135	49,499	709,075
Masterson, Shallow, *Pecos*	1929		23	23	100	33,023	1,150,425
Masterson, 3500-ft. sand, *Pecos*	1943	1		1	5	2,667	69,487
Means, *Andrews*	1943	57	88	145	3,500	1,357,235	10,779,993
Midland, *Midland*	1946	1		1	25	12,122	16,662
Midland Farms, *Ector*	1944	8	8	16	1,600	548,061	1,009,268
Monahans, Clear Fork, *Ward*	1945	7		7	475	135,633	157,068
Monahans, Ellenburger, *Ward*	1942	6		6	1,600	406,925	942,416
Monahans, Permian, *Ward*	1942	1		1	30	12,661	55,447
Monahans, N., *Winkler*	1944	6		6	100	44,052	161,964
Monahans, N., Glorietta, *Winkler*	1946	2		2	200	21,944	21,944
Monroe, *Ward*	1931	1		1	15	5,566	85,227
Moore, *Howard*	1937		17	17	75	26,403	184,167
Morita, *Howard*	1944		3	3	5	2,173	7,026
Moss, *Ector*	1938			abn'd			1,861
Nelson, *Andrews*	1946	1		1	220	50,206	50,206
Netterville, *Pecos*	1936	11	4	15	50	18,545	456,385
Ownby, *Yoakum*	1941	31	76	107	1,100	414,090	1,653,212
Parker, *Andrews*	1935		2	2	25	9,139	129,241
Pattillos, *Andrews*	1944			abn'd			2,170
Payton, *Pecos*	1938	8	118	126	500	190,875	3,799,017
Pecos Valley, High Gravity, *Pecos*	1928	50	66	116	600	185,289	2,263,982
Pecos Valley, Low Gravity, *Pecos*	1928	9	55	64	275	77,474	1,345,193
Penwell, *Ector*	1926	65	112	177	2,700	1,139,324	27,748,865
Penwell, Ellenburger, *Ector*	1946	1		1	50	13,877	13,877
P. H. D., *Garza-Lynn*	1945		8	8	200	58,121	59,963
Polar, *Kent*	1946	2		2	250	27,530	27,530
Pruitt, *Ward*	1942			abn'd			3,286
Pyote, *Ward*	1942	2		2	75	31,753	147,644
Rhodes, *Cochran*	1941		1	1	10	3,086	31,244
Richards (Pecos-Courtney), *Pecos*	1929		3	3		582	19,990
Robertson, *Gaines*	1945	1	2	3	125	58,908	143,446
Rowan Tong, *Pecos*	1929			abn'd			2,000
Russell, *Gaines*	1943	5	13	18	900	360,444	742,223
Sand Hills, McKnight, *Crane*	1944	12	3	15	1,500	244,879	533,035
Sand Hills, Ordovician, *Crane*	1936	27	4	31	1,000	376,610	2,290,186
Sand Hills, (Tubb), *Crane*	1934	196	60	256	8,100	2,984,823	13,315,446
Sand Hills, Ellenburger, *Crane*	1941	8		8	200	98,404	873,721
Sand Hills, W., *Crane*	1943		3	3	18	6,557	20,988
Scanlan, *Dawson*	1938			abn'd			310
Scarborough, *Winkler*	1927	29	88	117	600	238,622	8,128,985
Seminole, *Gaines*	1937	311	18	329	18,600	7,486,245	32,667,232
Sharon Ridge (Ira), 2400-ft., sand, *Scurry*	1924	8	114	122	700	256,323	256,323
Sharon Ridge, 1700-ft., sand, *Scurry*	1946	1	136	137	1,100	246,836	2,614,945
Shearer, *Pecos*	1938		43	43	175	62,746	1,607,457
Shipley, *Ward*	1928	11	123	134	1,000	429,141	7,545,249
Shipley, Silurian, *Ward*	1940	2		2	10	8,531	74,591
Signal, *Andrews*	1944			abn'd			1,640
Simpson, *Crockett*	1938			abn'd			3,955
Slaughter, *Cochran-Hockley-Terry*	1937	1,570	469	2,039	46,000	20,857,877	93,164,718
Smyer, *Hockley*	1944	1	2	3	60	22,035	66,982
Snyder, *Howard*	1936		106	106	550	193,795	3,104,841
Spencer, *Ward*	1941	5	7	12	125	57,888	320,838
Spraberry, *Dawson*	1946	1	3	5	150	40,498	40,498
Stennett, *Lubbock*	1945		1	1			
Swenson, *Garza*	1939			abn'd			1,515
Taylor-Link, *Pecos*	1929	17	138	155	1,400	483,423	9,719,915
Three Bar, *Andrews*	1945	2		2	150	98,515	153,583
Toborg, *Pecos*	1930		271	271	1,150	416,811	9,266,586
T. X. L., Clear Fork, *Ector*	1946	2		2	100	10,603	10,603
T. X. L., Devonian, *Ector*	1945	72	6	78	11,000	2,833,921	3,443,054
T. X. L., Ellenburger, *Ector*	1945	61		61	15,000	2,478,433	2,631,242
T. X. L., Wolf Camp, *Ector*	1946					289	289
Union, *Andrews*	1943	12	14	26	1,500	633,916	1,474,233
Vincent, *Howard*	1943		3	3	10	4,196	23,786
Waddell, *Crane*	1927	91	35	126	1,600	1,257,012	8,702,626
Waddell, Ella, *Crane*	1940		5	5	75	31,010	179,394
Walker, *Pecos*	1940	54	28	82	850	358,709	1,906,654
Waples-Platter, *Yoakum*	1939	3	12	15	200	74,434	308,279
Ward, N., Estes, *Ward*	1934	396	469	865	9,100	4,328,176	56,793,091
Ward, S., *Ward*	1928	52	464	516	1,500	547,469	29,975,209
Wasson, *Gaines-Yoakum*	1936	1,348	196	1,544	67,700	20,700,484	122,093,038
Wasson, "66", *Gaines*	1941	13		13	1,300	413,250	774,018
Wasson, "72", *Gaines*	1942	10	2	12	650	185,687	474,562
Weiner, *Winkler*	1941	58	5	63	800	365,803	1,780,588
Welch, *Dawson*	1941	4	71	75	2,400	1,009,874	1,090,640
Wentz, *Pecos*	1941		2	2	45	16,068	103,216
West, *Yoakum*	1938		1	1	20	8,337	73,439
West Andrews, *Andrews*	1940	3	13	16	57	24,676	179,473
Westbrook, *Mitchell-Scurry*	1921		155	155	1,400	514,631	12,174,418
Wheat, *Loving*	1926	26	52	78	650	244,179	10,023,533
Wheeler, Devonian, *Winkler*	1945	12		12	1,050	410,654	479,633
Wheeler, Ellenburger, *Winkler*	1943	20		20	2,600	991,433	1,935,055
Wheeler, Silurian, *Winkler*	1946	1		1	25	9,720	11,490
White-Baker, *Pecos*	1935	59	1	60	550	257,739	949,022
White-Baker, Lime, *Pecos*		1		1		2,838	16,549
White-Baker, Strawn, *Pecos*	1946	1		1	15	15,833	18,374
Yates, *Pecos-Crockett*	1926	520	53	573	41,800	13,474,794	314,520,248
Yates, Smith sand, *Pecos*	1939	1	14	15	190	83,524	735,697
Yellow House, *Hockley*	1944	1	3	4	100	46,432	113,777
Total, Texas, Dist. 8		8,584	8,761	17,345	499,725	181,126,503	1,707,299,130
Texas, District 9 (North Texas)							
Archer County	1913	117	3,723	3,840	21,500	8,207,495	170,346,297
Baylor County			172	172	1,300	548,748	8,337,383
Clay County	1902	44	1,205	1,249	8,550	3,673,192	26,527,375
Cooke County	1902	52	1,471	1,523	17,500	5,798,321	43,833,021
Foard County	1929	1	12	13	70	40,354	2,266,077
Hardeman County	1944					200	1,742
Jack County	1902	51	771	822	4,800	2,046,608	28,892,670
Knox County	1946		1	1	5	1,260	1,260
Montague County	1902	150	1,195	1,345	15,000	5,968,306	57,891,963
Wichita County	1911	626	6,400	7,026	29,000	11,946,172	428,445,757
Wilbarger County	1924	20	1,626	1,646	9,500	3,353,172	90,085,666
Young County	1926	189	2,262	2,451	10,775	3,626,684	92,909,401
Total, Texas, Dist. 9		1,250	18,838	20,088	118,000	45,210,512	949,537,612
Texas, District 10 (Texas Panhandle)							
Anton, *Lamb*	1944	1	7	8	375	124,020	187,849
Bateman Ranch, *King*	1943	5	16	21	775	244,735	474,975
Carson County	1923	6	782	788	9,000	3,505,877	58,126,559
Gray County	1925	5	2,602	2,607	39,000	14,579,582	263,484,347
Hutchinson County	1922	11	2,244	2,255	27,500	10,361,045	212,465,898
Irish, *Hale*	1946		2	2	200	26,083	26,083
Moore County	1927	1	13	14	300	97,338	5,885,010
Potter County	1918			abn'd			42,000
Ross Ranch		11	1	12	1,150	326,963	390,979
Wheeler County	1925	3	418	421	2,800	1,039,471	28,488,243
Total, Texas, Dist. 10		43	6,085	6,128	81,100	30,305,114	569,571,943
UTAH							
San Juan, *San Juan*	1910						14,000
Virgin, *Washington*	1908						191,300
Total Utah							205,300
WEST VIRGINIA							
Total West Virginia			17,211	17,211	7,400	2,947,000	430,022,000

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Field, County	Year of Discovery	Oil Producing Wells at End of 1946			Oil Production (Barrels)		
		Flowing	Art. Lift	Total	Daily at End of 1946	Year 1946	Cumulative Through 1946
WYOMING							
Badger Basin, *Park*	1931	5	2	7	605	181,770	872,605
Bailey Dome, *Carbon*	1945	1	3	4	90	47,085	150,745
Baxter Basin, N., 3 wells shut in, *Sweetwater*	1945					2,555	4,745
Beaver Creek, *Fremont*	1945	1		1	15	10,220	16,426
Big Hollow, *Carbon*	1944		2	2	8	2,920	7,300
Big Medicine Bow, *Carbon*	1935	2	5	7	330	141,255	4,805,602
Big Muddy, *Converse*	1915		162	162	1,575	553,340	29,408,395
Big Sand Draw, *Fremont*	1944	2		2	1,025	419,385	682,185
Black Mt., 5 wells shut in, *Hot Springs*	1925						304,955
Byron, *Big Horn*	1906		45	45	5,850	2,382,355	16,619,591
Circle Ridge, *Fremont*			12	12	895	379,235	1,178,997
Cole Creek, *Natrona*	1938		37	37	1,250	495,305	2,905,328
Cooper Cove, *Carbon*	1944		2	2	50	21,170	59,896
Corley Dome, *Hot Springs*	1946		2	2	100	15,695	15,695
Crooks Gap, *Fremont*	1944	5		5	1,325	554,070	1,019,456
Dallas Muddy, *Fremont*	1883		42	42	430	157,680	3,914,437
Dubois, 1 well shut in, *Fremont*	1946					4,380	4,380
Dutton Creek, *Carbon*	1927		3	3	30	10,950	362,457
Elk Basin, Light, *Park*	1915		122	122	305	122,640	12,118,600
Elk Basin, Tensleep, *Park*	1942	64	33	97	11,950	4,355,545	12,160,570
Elk Basin, S., *Park*	1945		3	3	605	198,560	313,535
Four Bears, 3 wells shut in, *Park*	1928						7,306
Frannie, *Park*	1928		43	43	3,450	1,240,270	11,428,644
Garland, *Big Horn*	1930		41	41	750	1,084,415	8,175,798
Gebo, *Hot Springs*	1943	5	8	13	1,025	408,800	1,124,645
Golden Eagle, *Hot Springs*	1944	2		2	125	15,330	17,155
G. P. Dome, 2 wells shut in, *Carbon*	1943					31	1,493
Gooseberry, 1 well shut in, *Park*	1937						33,110
Grass Creek, *Hot Springs*	1914		345	345	2,950	1,088,430	35,208,262
Graybull, 11 wells shut in, *Big Horn*	1907						346,730
Half Moon, *Park*	1944		5	5	225	63,145	98,185
Hamilton, *Hot Springs*	1913		38	38	2,625	1,347,215	9,215,725
Hidden Dome, *Washakie*	1933		16	16	18	7,300	416,465
Horse Creek, *Laramie*	1943		2	2	55	12,045	44,813
Hudson, *Fremont*	1914		29	29	195	82,125	2,668,806
Iron Creek, *Natrona*	1922		5	5	12	5,110	46,241
Kirby Creek, 7 wells shut in, *Hot Springs*	1944						19,364
La Barge and N. La Barge, *Sublette*	1923	4	145	149	1,200	511,000	10,272,857
Lamb	1945		1	1	35	14,235	14,235
Lance Creek, *Niobrara*	1918	31	203	234	11,975	4,669,445	73,757,289
Lance Creek, E., *Niobrara*	1944		5	5	345	129,210	235,123
Little Buck Creek, *Niobrara*	1944	5	6	11	1,275	233,235	296,415
Little Buffalo Basin, *Park*	1944		14	14	850	526,330	823,827
Lost Soldier, *Sweetwater*	1915	24	35	59	8,350	2,119,190	31,957,038
Mahoney, *Carbon*	1930	3	8	11	565	209,510	2,150,236
Mahoney,-E.-Ferris, *Carbon*	1940		2	2	7	2,555	572,381
Maverick Springs, *Fremont*	1922		45	45	610	285,430	2,898,155
Midway, 2 wells shut in, *Natrona*	1930						175,886
Mule Creek, *Niobrara*	1919		42	42	170	72,270	1,841,125
Mush Creek, *Weston*	1945		1	1	11	4,380	8,395
Notches, *Natrona*	1923		8	8	385	157,680	729,038
Oregon Basin, *Park*	1927		157	157	9,450	4,031,790	38,613,833
Osage, *Weston*	1920		198	198	305	118,625	5,633,604
Pilot Butte, *Fremont*	1916		12	12	915	344,195	2,195,385
Pitchfork, *Park*	1930		3	3	205	97,090	285,206
Quealy, *Albany*	1934		16	16	680	255,135	2,204,755
Rex Lake, *Albany*	1923		4	4	80	28,105	358,493
Rock Creek, *Carbon*	1918		55	55	2,275	845,705	25,232,039
Salt Creek, *Natrona*	1908	54	1,734	1,788	12,600	4,658,130	322,379,277
Sheep Creek, 2 wells shut in, *Fremont*	1935						5,453
Shoshone (Cody), *Park*	1929		2	2	45	20,440	168,278
Simpson Ridge, *Carbon*	1924		3	3	7	3,285	170,150
South Casper Creek & Poison Spider, *Natrona*	1920		37	37	735	274,845	5,050,380
Spindletop, *Natrona*	1928		4	4	25	5,475	59,781
Steamboat Butte, *Fremont*	1943		13	13	5,750	1,852,740	3,698,287
Teapot (outside Naval Res.), 2 wells shut in, *Natrona*	1927					2,555	140,102
Torchlight, 20 wells shut in, *Big Horn*	1905						254,709
Wagon Hound, *Hot Springs*	1944		1	1		37,960	112,079
Warm Springs, *Hot Springs*	1917		28	28	40	21,170	491,129
Wertz, *Carbon*	1936	17	6	23	2,250	1,066,895	12,832,037
Winkleman Dome, *Fremont*	1944		6	6	750	392,010	740,183
Zimmerman Butte, *Hot Springs*	1946		4	4	375	71,905	71,905
Other Wyoming, 2 wells shut in, Miscellaneous		2	13	15	1,067	71,344	4,136,388
Total Wyoming		227	3,818	4,045	101,200	38,544,200	706,344,595

Pipe Line Construction in 1946

• CONTINUED FROM PAGE 152

El Paso Natural Gas Company completed 12.6 miles of 5- and 6-inch natural gas line from the Emperor field to connect with its 10-inch carrier extending from Keyston field to Jal, N. M.

Gulf Refining Company completed 481 miles of 8-, 10-, 12- and 14-inch loop on its West Texas to Port Arthur system.

Humble Pipe Line Company replaced 9½ miles of 6-inch with 8-inch pipe between North Cowden field station and Emma field. The company also completed 7½ miles of 4-inch line from Fuhrman-Mascho station to the Three Bar field.

Magnolia Pipe Line Company completed 7½ miles of 8-inch loop on its crude line between Fullerton field and Andrews station. This unit will fill out an 8-inch loop installed in 1945 and when completed the company will have 4½, 6- and 8-inch parallel lines between the two points.

Magnolia Pipe Line Company completed a 35-mile, 10-inch loop parallel to two 8-inch units in its system between Andrews station and Midland terminal.

Magnolia Pipe Line Company completed 2½ miles of 4-inch line from the South Fullerton field to the Coopwood area.

South Plains Pipe Line Company completed 10 miles of 4-inch gathering lines in the northwest extension area of Slaughter field.

Shell Pipe Line Corporation completed 22.6 miles of 8-inch extension from Wheeler field station to Bedford field.

Standish Pipe Line Company completed a 1½-mile, 4-inch extension from the Embar and West Andrews fields to connect with leases operated by Kewanee Oil Company and the Atlantic Refining Company.

Stanolind Oil & Gas Company completed a 19-mile, 6-inch natural gas transmission line from its repressuring plant in Cedar Lake field to the Honolulu-Homann gas area 6 miles northeast of Seminole; and 5 miles of 2-inch field distribution lines.

Stanolind Pipe Line Company completed a 35-mile, 16-inch extension from the Slaughter field to its Wasson field booster station. A 3-mile, 4-inch lateral has been completed from this line to the Alex field.

Stanolind Pipe Line Company completed 5 miles of 4-inch line from the Wasson field to the Jones Ranch field.

Texas-New Mexico Pipe Line Company completed 6 miles of 6-inch crude line from Crane station to Block 31 field.

Texas-New Mexico Pipe Line Company completed 13 miles of 6- and 8-inch crude line from the Dollar Hide field to Block 12 field.

Texas New Mexico Pipe Line Company completed a 34-mile, 6-inch extension from Abell field station to Fort Stockton field, and 10 miles of 4-inch gathering lines in the field.

West Texas Gas Company completed an 11-mile, 10-inch loop to its system below Plainview in Hale County.

West Virginia

Hope Natural Gas Company will build 58 miles of 20-inch natural gas loop out of the Wyoming County gas fields.

Hope Natural Gas Company proposes to build 45 miles of 12-inch loop between Hastings station and Gilmer County.

Hope Natural Gas Company completed 143 miles of natural gas line from its Jackson compressor station to Baileyville magisterial district in Wyoming County.

United Fuel Gas Company completed 49 miles of 16-inch natural gas line from the Cobb compressor station through Knowha and Roane counties.

Wyoming

Stanolind Pipe Line Company, acting as agent for **Wyco Pipe Line Company**, proposes to build an 8-inch products pipe line from Casper through Cheyenne to Denver.

Stanolind Pipe Line Company proposes to loop 81 miles of 12-inch and 116 miles of 16-inch line on its present system from Casper to Freeman, Mo.

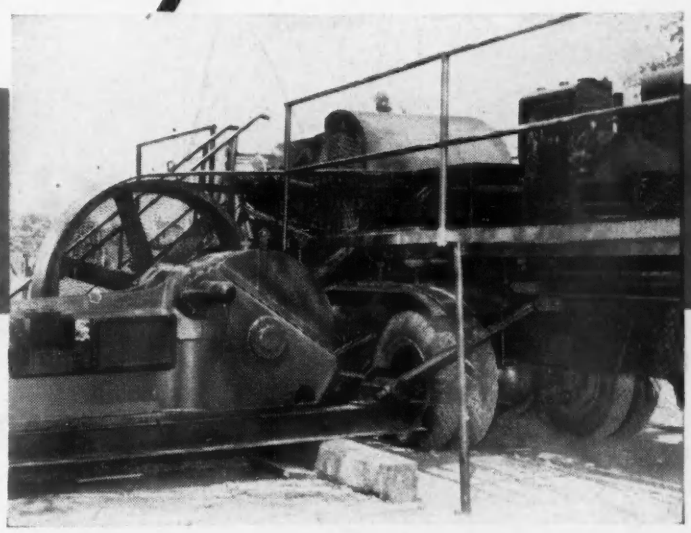
Hamilton Pipe Line Company completed a 24-mile, 8-inch crude line from Hamilton Dome to the Elk Basin-Casper line.

Northern Utilities Company completed 8 miles of 8-inch natural gas line from the Beaver Creek field to its main line from Sand Draw field into Casper.

Stanolind Pipe Line Company completed 85 miles of 8-inch crude line from Maverick Springs, Pilot Butte, and Steamboat Butte fields, Wind River Basin, to the Elk Basin-Casper main line.

DESIGNED TO PROVIDE *Extra Capacity*

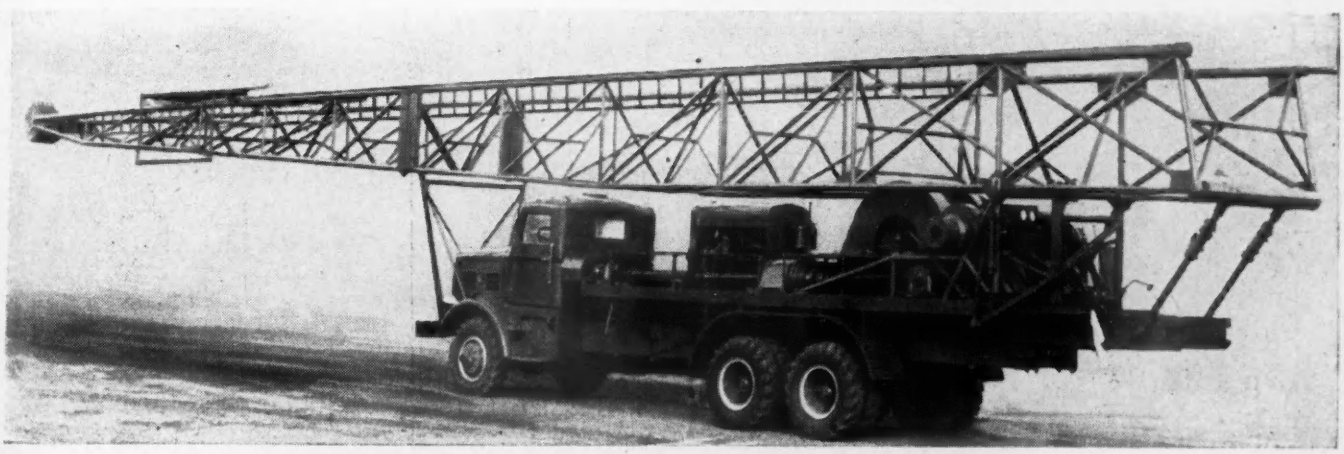
FRANKS MODEL 5000-L



This rig is so designed that a separately mounted, truck-motor driven pump affords greater drilling capacity. If even greater pump capacity is desired a separate engine may be used to drive the pump. The rated capacity of the Model 5000-L is from 4000 ft. of 4½" drill pipe to 5000 ft. of 3½" drill pipe. The unit is known for Franks famous features: elimination of conventional derrick cost; fastest rig-up and tear-down; fastest moving with least expense. See a Franks representative for details.

Above: Franks Model 5000-L showing pump hook-up. Pump may be either unit driven or powered by a separate engine.

Below: Franks Model 5000-L with 84 ft., 150,000 lb. capacity derrick in over-the-road position.



FIELD SERVICE

West Texas: Kenneth M. Lamer, Box 854, Phone 237-J, Monahans, Texas
East Texas: Albert E. Hastings, R. R. 1, Phone 597-J, Longview, Texas
Kansas: Tommy Knoblock, Box 437, Phone 526-W, Lyons, Kansas
Illinois Basin: Vern Alley, 518 No. Eleventh St., Phone 617-J, Mt. Vernon, Illinois
Call these points for Franks Field Service in these areas. Call Franks Main Office for other areas.

FRANKS REPRESENTATIVES

Main Office: Box 3218, Tulsa 8, Oklahoma
Export: A. V. Simonson, 149 Broadway, New York, N. Y.
California: Hillman-Kelley, Inc., 1000 Macy Street, Los Angeles
Illinois Basin: Stuart E. Corry, 518 No. Eleventh St., Mt. Vernon, Illinois
Texas, Louisiana, New Mexico, Arkansas, Mississippi: R. M. White, 823 Neil P. Anderson Bldg., Fort Worth, Texas
Rocky Mountain: Industrial Power Units, Inc., Box 152, Casper, Wyo.

FRANKS MFG. CORP.
WELL SERVICING AND DRILLING UNITS
TULSA, OKLAHOMA

CALIPER LOG

FIELD OR AREA	Baxterville	
COUNTY	Lamar	
STATE	Mississippi	
Run number	One	
Bottom recording	9002	ft.
Top recording	1650	ft.
Footage logged	7552	ft.
Casing shoe, caliper log	1650	ft.
Casing shoe, driller	1649	ft.
Total depth, driller	8998	ft.
Bit size	9⅞	in.
Casing size	10¾	in.

TEMPERATURE SURVEY

FIELD	Baxterville			
COUNTY	Lamar			
STATE	Mississippi			
Date of Cementing	12-30-46			
Date of Survey	12-31-46			
Am't of Cement	1500 sks.			
Am't of Admix	10 sks.			
Casing Size	Casing Depth			
7"	from 0	to	9000'	
Diam. of Hole	Depth			
9⅞"	from 0	to	9002'	
Survey Begins at	5000	Ft.		
Ends at	8910	Ft.		
Bottom Hole Temp.	237	°F.		
Max. Temp.	243	°F.		

Remarks
No returns while cementing.

CALIPER LOG

FIELD OR AREA	West Bay
PARISH	Plaquemines
STATE	Louisiana
Bottom recording,	8290'
Top recording,	2550'
Footage logged,	5740'
Casing shoe—caliper log,	2560'
Casing shoe—driller,	2551'
Total depth—driller,	9415'
Hole size,	12¼ in
	2551' to 8275 ft
Hole size,	8¾ in
	to 9415 ft

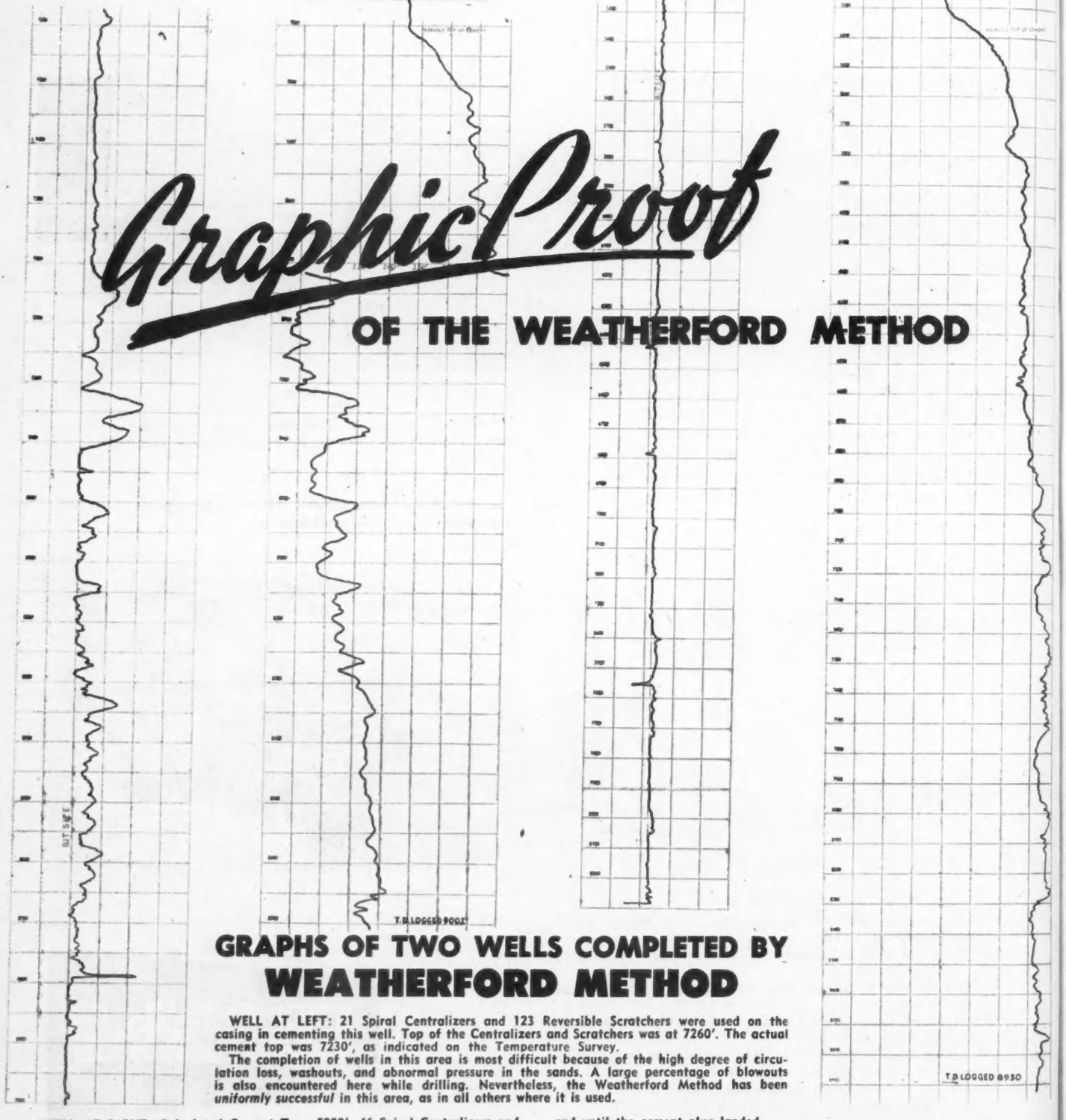
REMARKS OR OTHER DATA
Were unable to pass a bridge at 8290'.

TEMPERATURE SURVEY

COUNTY	Plaquemines			
STATE	Louisiana			
Date of Cementing	1-18-47			
Date of Survey	1-19-47			
Am't of Cement	2000 sks. Unaflo			
Casing Size	Casing Depth			
13⅜"	from 0	to	2551'	
5½"	from 0	to	9320'	
Diam. of Hole	Depth			
12¼"	from 2551'	to	8275'	
8¾"	from 8275'	to	9415'	
Survey Begins at	3000	ft		
Ends at	8930	ft		
Max. Temp.	200 °F.			

Graphic Proof

OF THE WEATHERFORD METHOD



GRAPHS OF TWO WELLS COMPLETED BY WEATHERFORD METHOD

WELL AT LEFT: 21 Spiral Centralizers and 123 Reversible Scratchers were used on the casing in cementing this well. Top of the Centralizers and Scratchers was at 7260'. The actual cement top was 7230', as indicated on the Temperature Survey.

The completion of wells in this area is most difficult because of the high degree of circulation loss, washouts, and abnormal pressure in the sands. A large percentage of blowouts is also encountered here while drilling. Nevertheless, the Weatherford Method has been *uniformly successful* in this area, as in all others where it is used.

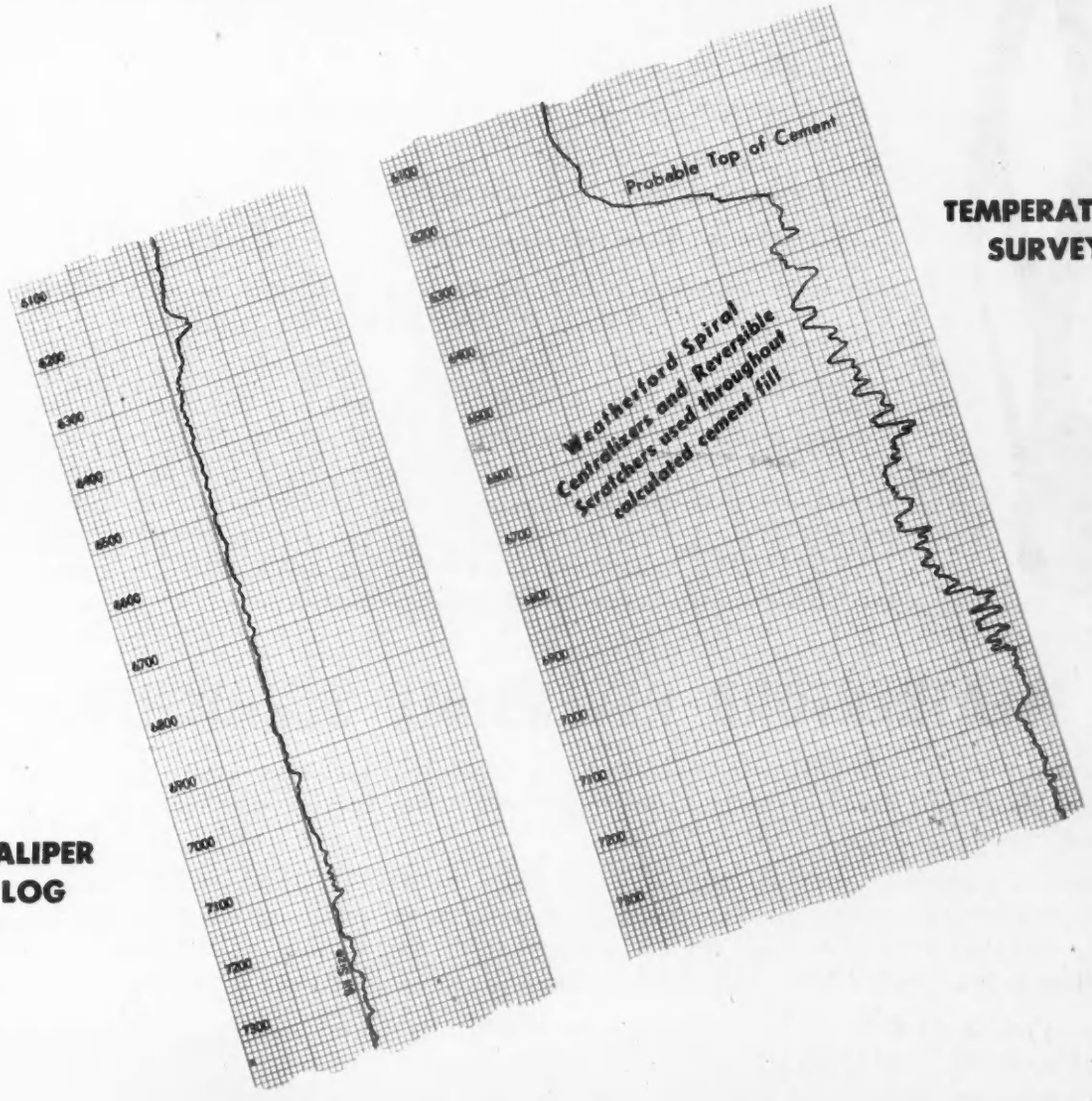
WELL AT RIGHT: Calculated Cement Top—5220'. 46 Spiral Centralizers and 280 Reversible Scratchers used from this point down to 9320'—providing a continuous cement fill of 4100 feet. (Use of the Weatherford Method has established the formula: Actual Cement Fill at 12% less than the Theoretical Cement Fill.) The Temperature Survey on this well shows top of cement at 5300'.

The casing on this well was reciprocated throughout the cementing operation and until the cement plug landed.

On the Caliper Log note the filter cake growth at 6340', 6430', 6790' and 7560'. These conditions also undoubtedly occurred between 8300' and 9320' (bottom of casing). The use of Spiral Centralizers at these points has cleaned out the growths, affording a cylindrical path for the flow of fluids and the freedom of the pipe.

SCS-101
2-1-47

SPIRAL CENTRALIZERS *and* REVERSIBLE SCRATCHERS


Probable Top of Cement
Weatherford Spiral Centralizers and Reversible Scratchers used throughout calculated cement fill
TEMPERATURE SURVEY
CALIPER LOG

WEATHERFORD
Spring Company

Manufacturers of Oil Well Specialties

WEATHERFORD, TEXAS

Telephone: 257 — Night Numbers: 380-W or 1007-J

WEST COAST PLANT
3316 JEWETT AVENUE, BAKERSFIELD, CAL.
TELEPHONE 4-4334

EXPORT OFFICE
617 SOUTH OLIVE ST., LOS ANGELES, CAL.
TELEPHONE VAndyke 8409

WEATHERFORD SPIRAL CENTRALIZERS

(PATENTS 2,220,237 and 2,258,052)

The principal functions of the WEATHERFORD SPIRAL CENTRALIZER are:

(1) to keep the casing away from the walls of the hole, in order to protect the scratchers and permit the cement to *completely surround* the pipe.

(2) to cut a *cylindrical path* in tight areas to assure free pipe movement and circulation.

(3) to effectively hold the casing out of drill pipe key-seats.

(4) to "man-handle" the cement in a spiraling and diverting fashion to break up channelling.

(5) to remove the major causes of pipe sticking.

(6) to abrade the well bore when necessary for removal of mud cake and cement cake growth during cementing operation.

(7) to knead the cement when working casing after the plug bumps.

The WEATHERFORD SPIRAL CENTRALIZER is the only existing cementing tool that adequately fulfills all of these important requirements.

DIMENSIONAL DATA: (1) The outside diameter of the collars of the SPIRAL CENTRALIZER caliper 7/8" greater than the O.D. of the casing to which it is applied. (2) The over-all outside diameter of the belly springs is approximately 5" more than the diameter of the casing. (3) At the time of installation, the outside diameter of the belly springs should be usually set from approximately 1/4" to 1" less than the drilled diameter of the hole. (4) The SPIRAL CENTRALIZER works best in holes that are drilled 1 1/2", or more, greater than the O.D. of the casing on which it is installed.

WEATHERFORD REVERSIBLE SCRATCHERS

The patented WEATHERFORD REVERSIBLE SCRATCHER is the only wall cleaning scratcher that maintains the maximum spread of its bristles—regardless of the varying diameters of the well bore in which it is operated.

This feature is exceedingly important because it enables the REVERSIBLE SCRATCHER to operate in a hole much smaller than its over-all diameter. Therefore, from the small and enlarged portions of the hole gelled mud, mud cake growth, cuttings, etc. are restored to the circulation and the cement is diverted into place, resulting in the prevention of channelling and in a direct bond between the cement and the formation.

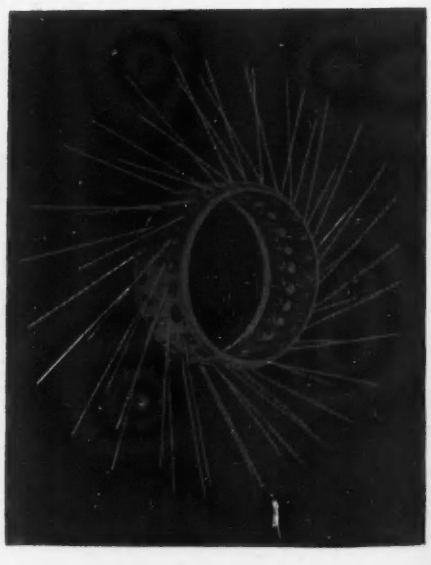
DIMENSIONAL DATA: There are two major kinds of Weatherford Scratchers. One is the STANDARD SCRATCHER, designed to work in a hole with a minimum diameter of 1 3/4" larger than the pipe on which it is installed. This scratcher band has an O.D. of 1" greater than the pipe.

The other is the CLOSE TOLERANCE SCRATCHER, designed to work in a hole with a minimum diameter of 1" larger than the pipe. The O.D. of this scratcher band calipers 9/16" larger than the pipe on which it is installed.

Both are made in the SOLID TYPE which is designed for collared pipe. Both also are made in the SPLIT TYPE which is designed for upset casing, tubing or drill pipe.

Each scratcher is available in 3, 4, and 5 inch bristle lengths. The 5" bristle scratcher reaches out to approximately 10" greater diameter than the casing. The other bristle lengths reach to corresponding smaller diameters.

Scratchers with special bristle lengths will be made up on request.



(PATENT No. 2,374,317)

CEMENTING PROCEDURE
with Weatherford Spiral Centralizers and Reversible Scratchers

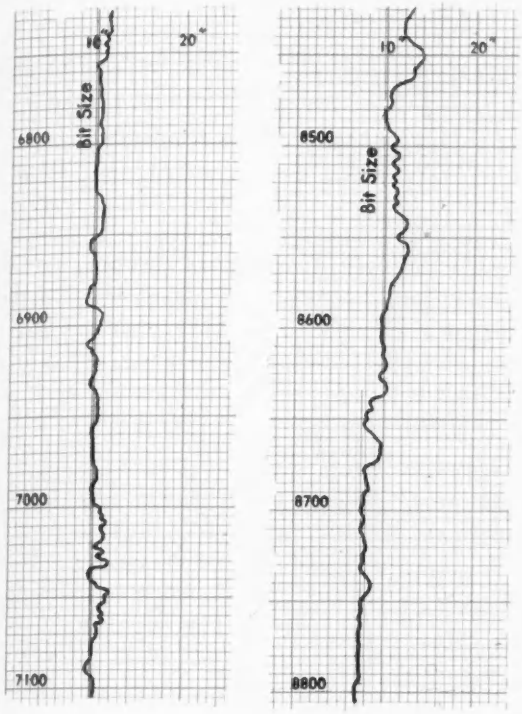


FIG. 1

In order to obtain a good cement job, it is necessary to put the cement in the right place. To accomplish this, certain corrections of bad conditions are necessary as the cement is being pumped to position.

A combination of Weatherford Spiral Centralizers and 5″ bristle Reversible Scratchers, *spaced throughout the actual cement fill*, will make the necessary corrections.

These corrections will produce a cement job that (1) will prevent the migration of fluids, gases, and formation particles up and down the hole on the outside of the casing, (2) will anchor the casing to the formation for support throughout the cement fill, and (3) will protect the well from the disastrous results of electrolysis, corrosion, pipe fatigue, and pipe wear.

Figure 1 shows sections of Caliper Logs of two wells which illustrate the obvious need for the Spiral Centralizer. Note how much the hole has grown up at some places, making the hole "tight." Through this "tight" hole the Spiral Centralizer must cut a CYLINDRICAL PATH, which permits the free circulation of mud and cement, furnishes room for a freely moving pipe, and creates room enough for the pipe to be held away from the walls of the well to enable the cement to be directed around it by the Spiral Centralizers and the Reversible Scratchers.

Figure 2 shows Caliper Log and Temperature Survey of the cement in a hole in which neither Centralizers nor Scratchers were used and which required squeezing. The Temperature Survey shows that the cement channelled by the cavities. The cement channelled 800 feet above the calculated cement top. Such channelling illustrates the necessity for 5″ bristle scratchers, which have an over-all diameter of approximately 10″ larger than pipe size. For, only the long bristle scratchers can reach into the cavities and move out their catches of gelled mud, sloughings, and drillings. It also takes the *diverting action* of the long bristle scratchers to *completely fill the cavities with cement.*

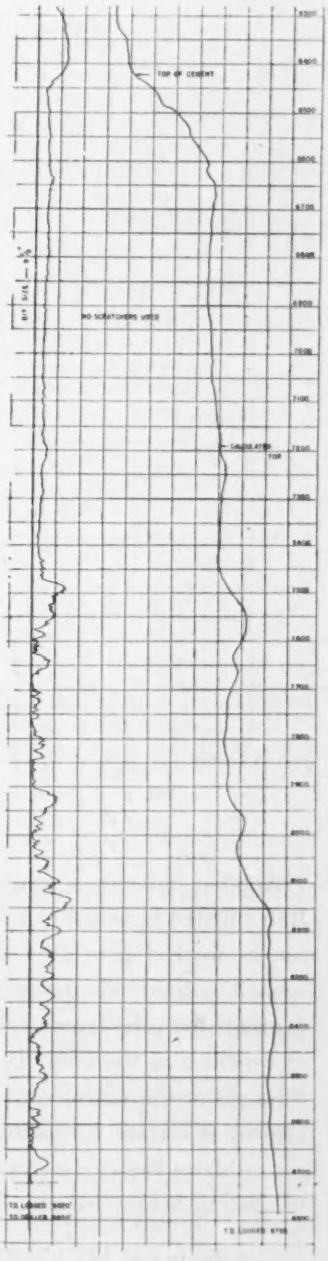


FIG. 2

No scratchers or spiral centralizers used. Cement channelled 800 feet above calculated cement top.

CEMENTING PROCEDURE (Continued)

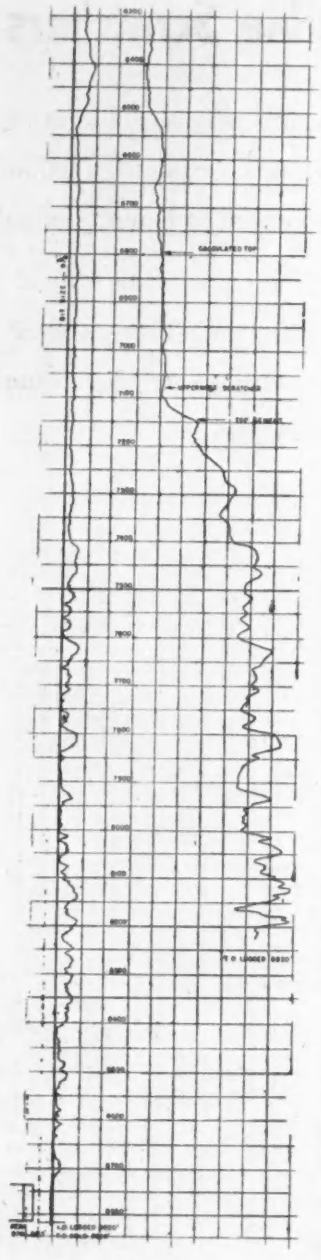


FIG. 3

Figure 3 shows well bore caliper (at left) and temperature survey of the cement in a well in which WEATHERFORD SPIRAL CENTRALIZERS and REVERSIBLE SCRATCHERS were used throughout the calculated cement fill. This well was drilled in the same district as was the well in Fig. 2. The top of the cement was 350 feet less than the calculated top. Even if the contamination of the cement top were disregarded, this Temperature Survey would still show that there was practically no channelling at the top of the cement, the point at which the greatest amount generally occurs. Also note that the cavities shown on the well bore caliper match up with the temperature increases on the temperature survey of the cement. This means that the cavities were well filled with cement. This well did *not* require squeezing.

Identical results in cementing were achieved in the well illustrated on the cover of this folder. But observe here that cavities and hole irregularities show up on the temperature chart that are not evident on the caliper survey.

Figure 4 is the Temperature Survey of a well where REVERSIBLE SCRATCHERS and SPIRAL CENTRALIZERS were spaced only *partially* throughout the cement fill. REVERSIBLE SCRATCHERS and SPIRAL CENTRALIZERS were spaced continuously from the bottom of the hole up to point X on the chart. In this area, the hole where Centralizers and Scratchers were used was well filled with cement and no squeeze was necessary. But in the area above point X, the cement channelled badly and became useless. The cement channelled there because it was out of the *control* of the SPIRAL CENTRALIZERS and REVERSIBLE SCRATCHERS.

Wherever WEATHERFORD SPIRAL CENTRALIZERS and REVERSIBLE SCRATCHERS have been employed *throughout* the calculated cement fill, Temperature Surveys and Gamma Ray Surveys of the radioactive Carnotite tracer in the cement have shown that the *actual* cement top was at, or below, the theoretical cement top as calculated from the well bore caliper. Only the elimination of channelling and the removal of mud cake will produce such results.

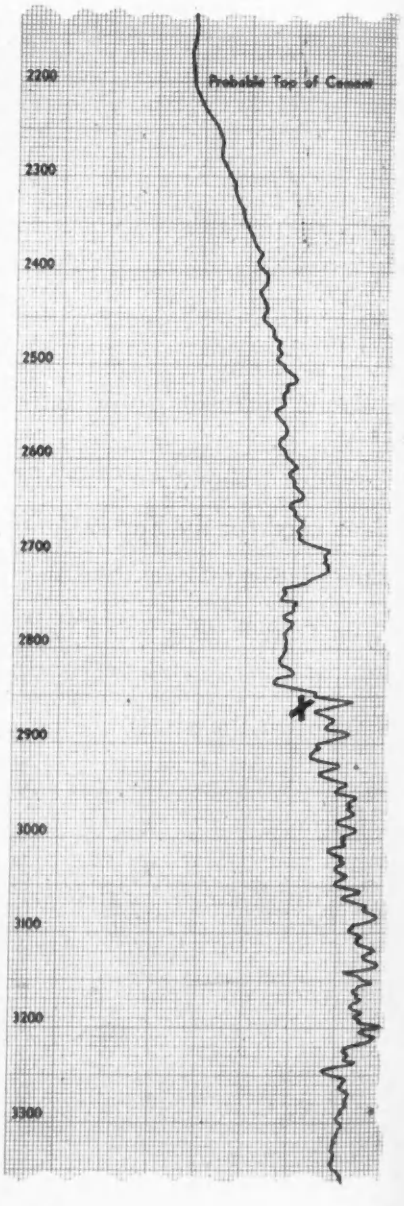


FIG. 4

Another advantage derived from completely protecting the cement fill with REVERSIBLE SCRATCHERS and SPIRAL CENTRALIZERS is that the casing can be worked long after the plug bumps, because this equipment keeps the entire cement column on the move and in a uniform fluid state longer, and therefore prevents the pipe from sticking as a result of cement dehydration at certain sections or portions of the hole. This procedure also produces a more uniform setting time throughout the entire cement fill by eliminating premature setting or bridging of cement at certain formations. The working of the casing after the plugs bump also consolidates the cement and eliminates voids in the cement column, which are due to settling below bridges.

The staging of WEATHERFORD LONG BRISTLE REVERSIBLE SCRATCHERS and SPIRAL CENTRALIZERS throughout the cement fill produces the cleanest cement column possible. It makes the working of the casing after the bumping of the plugs practical.

SPACING OF SPIRAL CENTRALIZERS AND REVERSIBLE SCRATCHERS

WEATHERFORD REVERSIBLE SCRATCHERS and SPIRAL CENTRALIZERS installed on the casing ready to be run in the hole and function throughout the calculated cement fill. The casing on this job was worked for 15 minutes after the plugs bumped.

The spacing program for WEATHERFORD REVERSIBLE SCRATCHERS and SPIRAL CENTRALIZERS is simple and easy to plan.

The first SPIRAL CENTRALIZER is installed on the first joint with the bottom of it coming approximately three feet above the top of the casing shoe. From there the centralizers are spaced a maximum of ninety feet apart on up the casing string throughout the cement fill, the last one being above the top scratcher. Although the ninety foot spacing has been very successful, a sixty foot spacing is preferred by many. A closer spacing should be used in directional holes or where it is desirable to pass centralizers continuously through a section of the hole during the pipe working procedure.

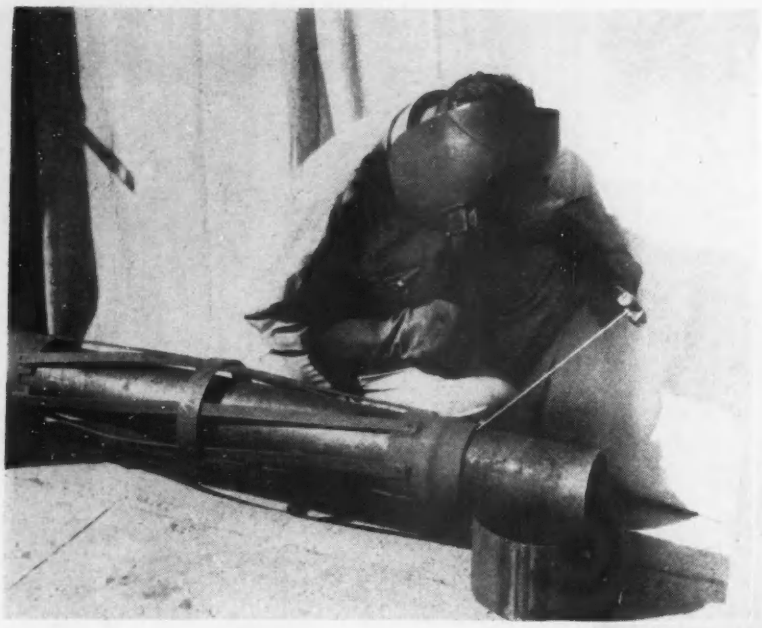
The REVERSIBLE SCRATCHER installation begins between the first SPIRAL CENTRALIZER and the shoe, with three scratchers spaced at equal intervals. From there the scratchers are spaced not more than 15 feet apart throughout the cement fill. A 10 foot spacing is also commonly used.

The casing should be worked continuously over as great a distance as possible while cementing, preferably about 35 feet.

There are so many problems in the running of casing and cementing wells that a complete analysis here would prove very lengthy. Therefore, it is the policy of the Weatherford Spring Company to assist each operator, in each district, during the running of the first few strings.

Experience with Weatherford tools, and results obtained, is convincing evidence that there can be no substitute for either the equipment or the method in the program outlined here.

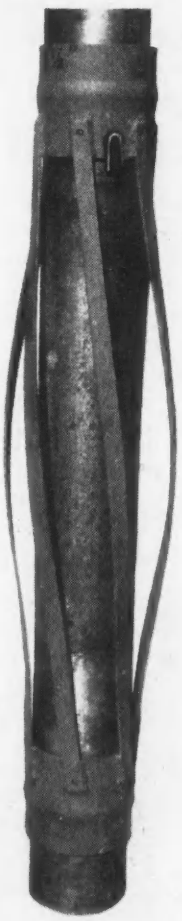
The procedure is interlocked with the tools, and neither will prove entirely successful without the other.



1

INSTALLATION OF WEATHERFORD SPIRAL CENTRALIZERS

2



3

Photograph No. 1 shows the start of the installation of a Spiral Centralizer. The bottom centralizer collar is being welded to the pipe first. On the 7″ size, four 2½″ welds are recommended; larger or smaller sizes are treated proportionately.

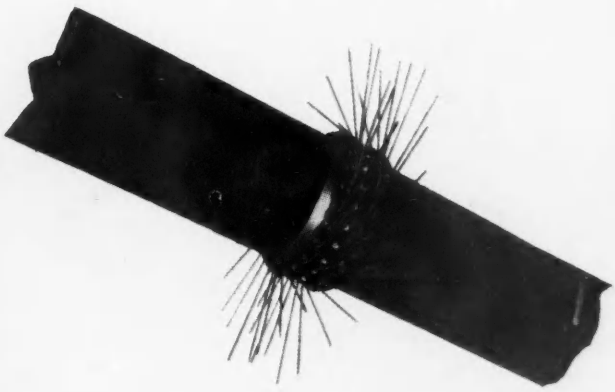
In Photograph No. 2, the DIAMETER CONTROLLING LUG has been fitted against the top of the slot and is being welded to the casing only. After the red has cooled out of the newly installed lugs, the setting band in the center is removed, either by hammering it off, or by dragging the electric arc across to cut it.

Photograph No. 3 shows the Spiral Centralizer completely installed. Inasmuch as the collar can move upwardly on the lugs, the springs can be compressed to the pipe, but they cannot expand because the collar "seats" against the lugs.

Note: Weatherford Spiral Centralizers are made larger than the hole so that the springs will be at or very near their maximum tension or centering power after being set to the desired size.

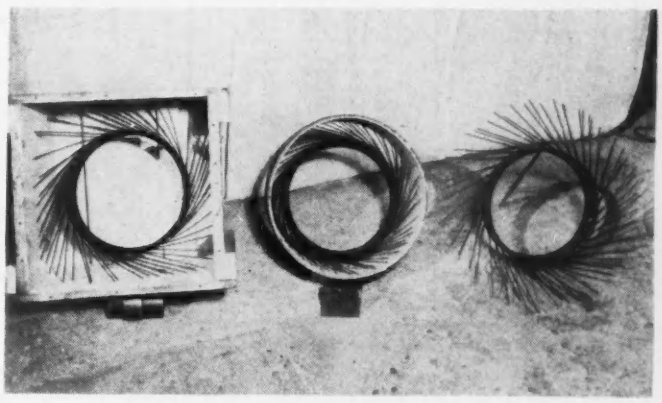
Observe that, because of this tension, the springs on the completely installed centralizer expanded slightly after removal of the band. Therefore, in making the setting band, allowance should be made for this expansion.

INSTALLATION OF WEATHERFORD REVERSIBLE SCRATCHERS



In the Photograph to the left, a WEATHERFORD REVERSIBLE SCRATCHER is installed on the casing. The lugs are welded approximately two feet apart so that the scratcher is free to travel over that distance. Allow three lugs to each side of the scratcher up to and including the 7⅝" size, four lugs on 8⅝" to 10¾" and five for larger sizes. The scratcher springs should be turned in opposite directions on alternate scratchers in order to produce the most effective scratching pattern on the face of the formation.

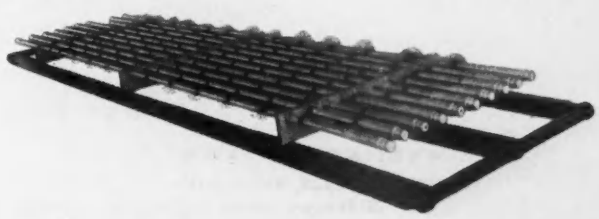
HOW THE REVERSIBLE SCRATCHER FUNCTIONS



To the right are three views, demonstrating the actions of the Weatherford Reversible Scratcher. At the left, its effectiveness in contacting all areas is seen. Middle view shows the Reversible Scratcher poised "on center" in a pipe collar, ready to be reversed in either direction with a light push of the hand. The scratcher will walk and crawl around in either container if worked up and down. This illustrates how the Weatherford Reversible Scratcher scratches in a different place on each reciprocation. In the last view the over-all spread is shown.

THE PLUG BACK STINGER

The PLUG BACK STINGER is another Weatherford innovation which has been in use for several years. It transforms the installation of a cement bridge or a bottom hole plug into a simple operation. The scratchers are spaced two feet apart from the bottom to a reasonable point above the calculated cement fill in order to take care of any miscalculations in the cement top. The scratcher stinger should be worked up and down as much as possible to remove mud cake, to puddle the cement back into the walls, and to eliminate channelling and resulting fluid flow-backs. The same scratchers can be used on several plug back jobs. The most practical plug back stinger is made up from heavy 2⅞" pipe. The SPLIT TYPE REVERSIBLE SCRATCHER is used in bristle lengths ranging from three to five inches.



PRICE LIST

SPIRAL

CENTRALIZER

PIPE SIZE	Price	Weight in Pounds
2⅜"	$26.00	6
2⅞"	26.00	6
3½"	26.40	8
4 "	26.95	14½
4½"	27.50	17
4¾"	28.05	18
5 "	28.05	19
5⅛"	28.60	22
5¾"	31.35	20½
6 "	31.90	23
6⅝"	32.45	24
7 "	33.00	25
7⅝"	35.75	28
8¾"	38.50	31
9 "	40.70	32
9⅝"	42.35	32¾
10¾"	45.10	36
11¾"	47.85	40
12¾"	50.60	41½
13 "	53.35	42½
13⅜"	55.00	46
16 "	66.00	52

Specify Hole and Pipe Sizes when ordering Spiral Centralizers.

REVERSIBLE SCRATCHERS

STANDARD TYPE

SOLID

SPLIT

CLOSE TOLERANCE TYPE

SOLID

SPLIT

Price	Weight in Pounds	PIPE SIZE	Price	Weight in Pounds
$ 6.60	¾	2⅜"	$ 7.30	¾
6.60	¾	2⅞"	7.30	¾
7.15	¾	3½"	7.90	¾
7.45	1	4 "	8.20	1
7.70	1½	4½"	8.50	1½
7.70	1½	4¾"	8.50	1½
7.70	1¾	5 "	8.50	1¾
8.00	1¾	5⅛"	8.80	1¾
8.00	2	5¾"	8.80	2
8.00	2¼	6 "	8.80	2¼
8.25	2¼	6⅝"	9.10	2¼
8.25	2½	7 "	9.10	2½
8.55	2½	7⅝"	9.40	2½
8.80	2¾	8¾"	9.70	2¾
9.35	3	9 "	10.30	3
9.35	3	9⅝"	10.30	3
9.90	3½	10¾"	10.90	3½
10.45	4	11¾"	11.50	4
12.10	4¼	12¾"	13.35	4¼
12.65	4¼	13 "	13.95	4¼
12.65	4¼	13⅜"	13.95	4¼
15.15	6	16 "	16.65	6

Specify Hole and Pipe Sizes, Scratcher Type, and bristle length when ordering Scratchers.

TERMS AND CONDITIONS OF SALE

We guarantee goods of our own manufacture against defects in material and workmanship.

Our regular terms are 2%—10th proximo, or net cash 30 days.

All quotations and sales are F.O.B. Weatherford, Texas, unless otherwise expressly stipulated. Our responsibility ceases upon delivery of bill of lading or dock receipt, invoice and supplementary documents to the customer or his agent, or upon delivery of the shipment to any common carrier.

All quotations are subject to change without notice and are for immediate acceptance unless otherwise specified. Delivery dates promised will be maintained to the best of our ability but cannot be guaranteed. Orders placed with us for special goods are not subject to cancellation under any circumstances.

All agreements are subject to strikes, accidents and other causes beyond our control.

We reserve the right to change or modify the design and construction of any Weatherford Spring Company products, in due course of manufacturing procedure, without incurring any obligation to furnish or install such changes or modifications on products previously or subsequently sold.

WEATHERFORD

Spring Company

Manufacturers of Oil Well Specialties

WEATHERFORD, TEXAS

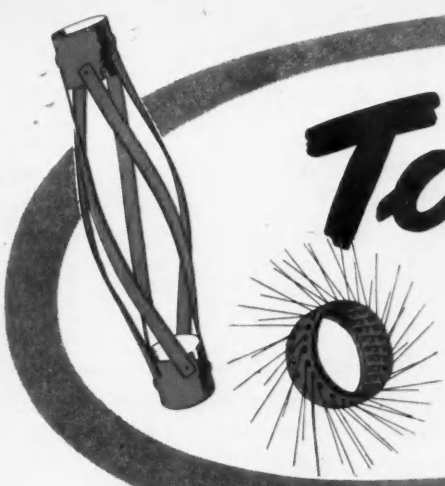
Telephone: 257 — Night Numbers: 380-W or 1007-J

WEST COAST PLANT

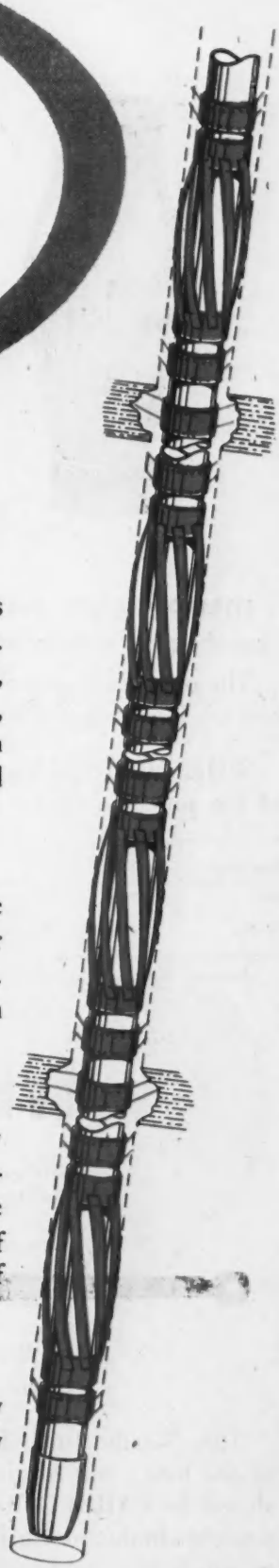
3316 JEWETT AVENUE, BAKERSFIELD, CAL.
TELEPHONE 4-4334

EXPORT OFFICE

617 SOUTH OLIVE ST., LOS ANGELES, CAL.
TELEPHONE VAndyke 8409



Together- THEY MAKE ONE TOOL!



For a Successful Cementing Job the use of Weatherford SPIRAL CENTRALIZERS and REVERSIBLE SCRATCHERS is necessary

The Weatherford Method — use of Spiral Centralizers and Reversible Scratchers in combination—is the only *proven method* of obtaining a successful cementing job. Operators and field men in the Gulf Coast areas of Louisiana and Mississippi, where completion problems are greatest and standards of technique are highest, have been quick to adopt the Weatherford method. Other localities, as in South Texas, are giving whole-hearted support to this method because they have found it to be the only *sure way* to get a good cementing job.

WEATHERFORD ENGINEERING SERVICE

The presence of a Weatherford Engineer on jobs where Weatherford Tools are used for the *first few times* is necessary. He will advise concerning the proper placement of centralizers and scratchers on the pipe, thus assuring the best results. A telephone call at any time of the day or night will summon a Weatherford man to your job in quick order, without charge to your company.

INCREASED FACILITIES

Both Weatherford Production and Field Personnel have increased approximately 5 times since the beginning of the year 1946. This expansion is the result of increased use of Weatherford Tools and Methods by companies who have found the answer to their cementing problems. Furthermore, the expanded operations of Weatherford Spring Company will enable more companies to take advantage of the Weatherford Cementing Service.

OTHER EQUIPMENT AND TECHNIQUES

In addition to the expansion in the field of cementing during 1946, many advanced techniques have been developed in other forms of equipment by Weatherford. Watch for announcement of these tools and techniques.

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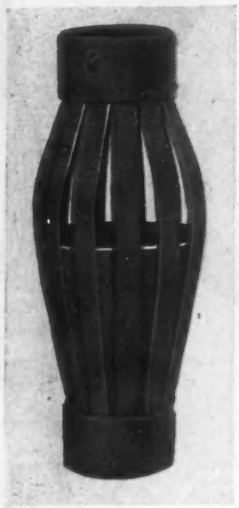
WEATHERFORD CEMENT BASKET

(Patents: 2,258,059 and 2,392,145)



The Weatherford Cement Basket is primarily a cementing tool. Its use, however, as a Shale Catching Basket or as a Sand Catching Basket, on perforated liners of all types cannot be duplicated by any other tool.

Aside from its basket qualities, the Weatherford Cement Basket functions as a good centralizer.

Anchored to the pipe at the bottom by welding and suspended from the top by lugs, the Weatherford Basket *will not roll back over itself and tear up* when the pipe is picked up on the trip into the hole, or when a great weight of material builds above it.

Short, upstanding convex springs, fitted inside the housing springs, overlap the space between the housing springs and form a basket-like container regardless of the diameter to which the springs are compressed. When the basket is compressed, the inside overlapping springs which form the basket are never distorted or wrinkled to the extent that they allow materials to pass—a fault common to the old-fashioned type of basket.

DIMENSIONAL DATA: The outside diameter of the Weatherford Cement Basket collars is 3/4" larger than the pipe on which the Basket is used.

The outside diameter of the basket part of the Weatherford Basket is made in two dimensions: 3 1/2" and 6" larger than the casing on which it is to be installed.

WHEN ORDERING, specify (1) the size of the pipe the Basket is to run on, (2) the inside diameter of the pipe the Basket is to run through, and (3) the size of the hole in which the Basket is to operate.

Pipe Size	2 7/8"	3 1/2"	4"	4 1/2"	4 3/4"	5"	5 1/2"	5 3/4"	6"	6 5/8"	7"	7 5/8"	8 5/8"	9"	9 5/8"	10 3/4"	11 3/4"	12 3/4"	13"	13 3/8"
Price	$33.00	33.00	33.55	34.10	34.65	34.65	35.20	35.75	35.75	36.30	36.85	37.40	37.95	38.50	38.50	39.05	39.60	40.15	40.70	41.25
Weight	6 lb	7 lb	7 1/2 lb	8 lb	8 lb	8 1/2 lb	9 lb	9 1/2 lb	10 1/4 lb	11 lb	11 1/4 lb	12 lb	12 1/2 lb	13 lb	13 1/2 lb	14 lb	14 1/2 lb	15 lb	15 1/2 lb	16 lb

Prices are net and subject to change without notice.

WEATHERFORD "LONG LIFE" PULL-BACK SPRING

(Patent Applied For)

It's Barrel-rolled . . . so . . .
It Stretches from the Middle Outwardly Towards the Ends

The Weatherford Tong Pull-Back Spring is scientifically designed to take care of the long sweeps of the tongs and to give *more hours* service than any other pull-back spring on the market. . . . Photograph shows the BARREL-ROLLED Weatherford Pull-Back Spring slightly stretched. This is the *only* spring that stretches in the middle before it stretches at the ends. Because of its construction, the stretching and the jerking to which it is subjected are distributed more evenly throughout the Weatherford "Long Life" Pull-Back Spring, thereby prolonging its life. This spring is equipped with eye swivel ends.

WEIGHT	DIAMETERS	LENGTH
13 1/2 Pounds	2 1/4" at Center 3/4" at Ends	55 Inches

Net Price $6.60
(Subject to change without notice)

WEATHERFORD DRILL PIPE WIPER

(PATENT No. 2,392,146)

BOTTOM SIDE UP

The all-purpose Weatherford Drill Pipe Wiper is so constructed that it OUT-LASTS . . . OUT-WIPES . . . and OUT-SERVES all others.

The *bowl shape* of the Weatherford DPW produces these remarkable results:

1. "Flow-over" fluids are caught and delivered back into the hole. This is made possible by the four DRAINAGE PORTS (illustrated in the photograph) which are opened to the desired size by removing a portion, or all, of the thin layer of rubber blocking off the large molded holes.

2. It lasts longer . . . The *wiping lip* cannot be "chewed up" against the rotary table bushings by the tool joints and by the drill pipe . . . because the *bowl design* holds it away from the bushings *at all times.*

The solid rubber construction of the Weatherford DPW gives it the following additional advantages: (1) No metal to tear loose from rubber, and (2) the elimination of "sparking" hazards.

The Weatherford Drill Pipe Wiper is available in the following sizes and net prices for the 2⅜", 2⅞", 3½", 4½" or 5-9/16" pipe size:

17 in. (outside diameter) 11 lbs. . . . . $40.00 14 in. (outside diameter) 7 lbs. $38.00

Prices subject to change without notice. Oil Resistant Drill Pipe Wipers are furnished on specification.

FULL GUARANTEE

Due to its construction and the materials used, every Weatherford Drill Pipe Wiper sold during 1947 carries this guarantee: If the WDPW does not prove superior to any you have ever used, return it to the dealer from which it was bought and you will be given new rubber or your money will be refunded. Every dealer selling the Weatherford Drill Pipe Wiper will be instructed to execute the terms of this guarantee.

J. E. Hall

Owner Weatherford Spring Co.

TOP SIDE UP

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WEATHERFORD, TEXAS

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Salient Data on Productive Exploratory Wells Completed in U. S. in 1946

PRESENTED in the following comprehensive table is significant information on successful exploratory wells completed in the United States in 1946. The table embodies data on producing formations, depths, initial daily production, and completion dates of each of these successful exploratory wells. In addition, the final column shows the number of producing wells at the end of the year in the area or zone opened for production by the productive exploratory well listed.

In 1946 exploratory drilling reached a new all-time high. More than 4800 exploratory wells were completed. That was about 7 percent more than the number completed in 1945.

The pay-off in successful wells likewise was up about 7 percent, making the following list about that much longer than the similar list published in the Yearbook-Forecast issue of a year ago.

While these statements afford a rough appraisal of the relative volume and success of exploratory drilling in 1946, more detailed statistical analyses are made in separate articles in this issue. They show results in 1946 by states and districts, compared with results in 1945 and other earlier years; show the ratio between total drilling and exploratory drilling in 1946 as compared with former years; and tabulate total and exploratory development by some of the more active companies and remaining companies in the aggregate.

THE OIL WEEKLY publishes significant data on productive exploratory wells currently each month in somewhat more detail than the tabulations here. This annual table combines the monthly data into a convenient record for the year for each district. In addition, this annual tabulation affords a year-end re-appraisal of the importance of each area listed, by showing the number of producing wells completed up to the end of the year.

County	Field	COMPANY, WELL AND LOCATION	Date Completed	Total Depth (Feet)	[1]Completion Horizon (Feet)	[2]Name, Character and Age of Producing Formation	[3]Initial Production: Method and Choke	Gravity of Oil	[4]Prod. Wells Year End
		ARKANSAS—New Oil Fields							
Columbia	McNeil	Atlas O & R Co.'s R. A. Wynn 1, sw sw 8-16s-19w, 2 mi s of Shallow Stephens fld.	12- 5-46	6627	3504- 3511	Pettit li; L Cre	P 45; 43 wtr	28	1
Lafayette	Lewisville, W	McAlester Fuel Co.'s Adams Est, 1-A, sw nw 16-16s-24w, 3½ mi e Spirit Lake prod.	10- 8-46	4350	3977- 3992	Hill sd; L Cre	P 145; 55 wtr	36.6	1
Lafayette	Spirit Lake	Austin E. Stewart-H. G. Lewis Jr.'s Hyrum Moore Est. 1, cnw se 14-16s-25w, 4 mi w Lewisville.	7-30-46	4513	4098-	Kilpatrick sd; L Cre	F 248; 1/2"	40	3
Nevada	Willisville	Chas. F. Steele et al's H. L. Waters 1, n½ nw ne 20-14s-21w, 2½ mi sw Irma fld.	5- 9-46	2263	1189- 1209	Nacatoch sd; U Cre	P 30; 80 wtr	....	1
Ouachita	Pace City	Joe Mucher Tr's Josie Smith 1, ne se sw 30-15s-17w, 3 mi e Gum Creek.	10- 1-46	3563	2758- 2762	Glen Rose sd; L Cre	P 20; 2 wtr	28	1
		ARKANSAS—New Oil Pays							
Columbia	Buckner	G. H. Vaughn et al's W. C. Dean 1, (OWWO) c nw nw 15-16s-22w	12-24-46	7308	4056- 4060	Travis Peak sd; L Cre	F 242; 1/2"	30.5	1
Columbia	Village	E. G. Bradhams's Tena Crumpler 1, cnw nw 15-17s-19w	6-20-46	7492	5565- 5574 6885- 6892	Cotton Valley sd; Jur Cotton Valley sd; Jur	F 100; 1/2" F 116; 1/2"	49.2 48	4
Columbia	Village	McAlesters Fuel Co.'s E. D. Harris D-1, c ne se 9-17s-19w	11-15-46	7362	4770- 4798	Travis Peak sd; L Cre	F 137; 1/2"	48.6	2
Ouachita	Wesson	McAlester Fuel Co.'s C. M. Wesson 2-B, c ne se nw 24-15s-19w	2- 1-46	3951	3488- 3502	Travis Peak sd; L Cre	F 102; 1/2"	38	1
Ouachita	Wesson	McAlester Fuel Co.'s C. M. Wesson D-3, sw nw 24-15s-19w	9- 7-46	1535	1520- 1525	Nacatoch sd; U Cre	P 107; 10% w	....	1
Union	Champagnolle	Atlantic's Goode 1, nw 6-17s-13w	2-10-46	5657	5632- 5645	Smackover li; Jur	P 34; 96 wtr	22	1
		ARKANSAS—Oil Field Extensions							
Columbia	Village	McAlester Fuel Co.'s J. G. Alexander A-1, ne ne 17-17s-19w, 1 mi w ext.	11-30-46	7390	4833- 4838	Travis Peak sd; L Cre	P 35; 35 wtr	35	1
Lafayette	Patton	Mid-Continent's O. S. Moore, cse nw 33-17s-24w	1-18-46	9321	9316- 9319	Smackover li; Jur	F 190; 1/2"	45	1
		ARKANSAS—New Distillate Field							
Columbia	Warnock Springs	McAlester Fuel Co.'s R. S. Warnock Est. A-1, c nw ne 6-17s-19w, 2 mi nw Village fld.	12-20-46	7418	7412- 7415	Smackover li; Jur	F 50; 4.5 mln 1/4"	....	1
		CALIFORNIA—New Oil Fields							
Kern	Sheep Springs, W	Independent Exploration Co.'s Tembler 2, 17-29s-21e	3- -46	2828	2790- 2828	Carneros sd	F 1500; 1"	17.9	5
Kern		Cleveland Oil Co.'s Ten Eyck 1, 29-30s-29e, Mountain View ar.	8- -46	5449	5221-	Transition sd; Mio	F 1000	29.5	1
Kern		Pacific O & G Dev. Co.'s Castleberry 72, 22-25s-27e, Jasmine ar.	8- -46	2794	.....	Vedder sd; Mio	P 75	13.5	1
Kern		Union Oil Co.'s DiGiorgio 71, 3-31s-29e, 1 mi se Mountain View fld.	9- -46	4705	4505-	Santa Margarita sd; Mio	F 200	20	..
Kern		Western Gulf Oil Co.'s DiGiorgio 1, nw 10-31s-29e, Arvin area se Mountain View fld.	11-15-46	6163	5935- 6160	Fractured Schist	F 480; 1.7% wtr	31.6	..
Los Angeles	Alondra	British-American Oil Prod Co-Texas Co.'s Bodger 1, 22-3s-14w, Gardena suburb of Los Angeles.	8- -46	9154	9087- 9154	Conglomerate	F 1040; 11/64"	26	1
Los Angeles	El Segundo, N	Shell Oil Co.'s Operator, Six Co.'s Fee 1, 2-3s-15w, just w of of Los Angeles airport.	8- -46	7033	6780- 6842	Schist cgl; Jur	F 300; 1"	....	1
Los Angeles	Los Angeles, E	Richfield Oil Corp's Union Pacific 1, 9-2s-12w	2- -46	9629	- 8590	Miocene	F 166; 71% wtr; 1/4"	32.1	4
Los Angeles		Basin Oil Co's Standard Brick 1, 28-2s-14w, Inglewood area, 1 mi nw of Potrero fld.	10- -46	10418	.....	Miocene	F 250; .6 mln; 1/2	28	1
Los Angeles		Shell Oil Co. et al's Braille Institute 1, 2-3n-16w, abt 1 mi s of Newhall.	9-13-46	4712	3620- 3680	Sd; Miocene	P 100	27.4	1
Orange	Buena Park	General Pet. Co's Librown 1, 21-3s-11w	2- -46	12600	11617-	.....	F 130; 10% w	27.9	2

[1] "Completion horizon" indicates depth interval from which production came in discovery well. [2] Character of producing formations abbreviated thus: ch, chalk; dolo, dolomite; li, limestone; sd, sandstone; sh, shale; ser, serpentine; cgl, conglomerate. Ages of formations abbreviated thus: Pleis, Pleistocene; Plio, Pliocene; Mio, Miocene; Olig, Oligocene; Eoc, Eocene; U. Cre, Upper Cretaceous; L. Cre, Lower Cretaceous; Jur, Jurassic; Tri, Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Miss, Lower Mississippian; Devo, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian. [3] Barrels of oil per day (24 hr. rate) flowing (F), pumping (P), swabbing (Sw), or bailing (B); or million cubic feet of gas daily open flow capacity; size of choke given in inches. [4] This final column shows number of producing wells at end of 1946 in the new field, new pay zone, or extension area opened by the productive exploratory well listed.

SALIENT DATA ON PRODUCTIVE EXPLORATORY WELLS COMPLETED IN U. S. IN 1946

County	Field	COMPANY, WELL AND LOCATION	Date Completed	Total Depth (Feet)	[1]Completion Horizon (Feet)	[2]Name, Character and Age of Producing Formation	[3]Initial Production: Methed and Choke	Gravity of Oil	[4]Prod. Wells Year End
		CALIFORNIA—New Oil Pays							
Kern	Cymric	Superior Oil Co's Woody 77-22, 22-29s-21e	3- -46	5340	5038-	Point of Rocks sd; Eoc	F 200; 11/64"	45	7
Kern	Poso Creek	Bender Oil Operations' Kelly 2, 20-28s-27e, ½ mi w of prod.	6-12-46	3572	3449- 3470	Santa Margarita sd; U Mio	P 130	14	1
Santa Barbara	Casmalia	Bell-Casmite Oil Co's Arellanes 2, sect 13-9n-35w	4- -46	5950	4100- 4800	Sd; Miocene	P 320; 7% wtr	19.9	1
		CALIFORNIA—Oil Field Extensions							
Fresno	Lanare	Pacific Western Oil Corp's Brix-Francis Community 1, 16-17s-18e, ½ mi nw ext.	11- 8-46	7150	.....	Temblor sd; Mio	F 300	38.5	..
Kern	Cymric	Standard of Calif's Weston 33, ½ mi se ext	2-10-46	4941	4926- 4941	Oceanic sd; Mio	F 500	....	28
Kern	Mountain View	Texas Co's Richfield-Mott 1, 9-31s-29e, 1 mi s ext	5- -46	6650	6080- 6135	Chanac-Sta. Marg. sd; U Mio	F 325; ¼"	32.8	1
Kern	Paloma	Western Gulf Oil Co's Los Angeles Athletic Club 76-1, 1-32s-26e, ½ mi e ext.	5- -46	11465	11265-11465	Stevens sd; Mio	F 2000; 11/64"	31.7	1
Kern	Temblor	Richfield Oil Corp's Miller & Lux Fee 2, 18-29s-21e, 1 mi nw ext.	5- -46	2787	2725- 2746	Carneros sd; Mio	.....	....	1
Los Angeles	Domi nguez	Shell's Dominguez Estate 1, 2-4s-13w, ¾ mi se ext	3- -46	10478	8660-10478	Miocene	P 250	27	1
Ventura	Del Valle	Universal Consolidated Oil Co's Aguirre 1, 13-4n-18w	4- -46	3859	2988- 3859	.....	P 210; 6% wtr	21.6	2
		CALIFORNIA—New Gas Fields							
Butte	.....	Standard of Calif's Donhoe fee 1, 6-20n-1e, Durham area, 3 mi sw of Chico gas fld.	7- -46	6000	2140- 2176	Meganos sd; Eoc	F 10.9 mln	....	1
Kern	.....	The Texas Co's West Pet. Co. 1, 29-30s-22e, alng the Belgian Anticline abt ¾ mi s of McKittrick fld.	10- -46	5173	5143- 5173	Oceanic sd	10 mln	....	..
Solano	.....	Shell Oil's McCune 1, 29-8n-1e, 6 mi e of Winters town	1- -46	5528	5209- 5239	Sd; Eocene	6 mln	....	1
Yolo	.....	Texas Co's Hermle 1, 22-11n-1w, Dunnigan Hills sect	3- -46	4022	2570- 2580 2612- 2620	.....	3 mln; 3/8"	....	1
		CALIFORNIA—Gas Field Extensions							
Solano	Kirby Hills	Standard of Calif's Kirby Comm. 1, 24-4n-1w	5- -46	2350	1530- 1681	Domengine sd; Eoc	4.2 mln; ½"	....	2
Tulare	Trico	G. B. Finch Oil Co's Finch 1, 7-24s-23e, nw ext.	2-18-46	3298	3179- 3242 3285- 3295	Sd	F 5 mln	....	5
Yolo	Dunnigan Hills	Natural Gas Corp's DuBois 1, 28-11n-1w, 1 mi sw ext	5- -46	2880	2520- 2599	Capay sd; Eoc	2.7 mln; ½"	....	1
Yolo	Winters	Shell Oil Co's Winters Unit 1-1, 19-8n-1e, 1 mi nw of McCune 1, disc. well.	9-29-46	5238	4960- 4975 5030- 5034	Sd; Eocene	3.1 mln; ¼"	....	1
		COLORADO—New Oil Field							
Moffat	Elk Springs	Conti ental's Margaret Smith 1, nw se sw 36-5n-98w, 28 mi ne of Rangely fld.	11-27-46	6231	6087- 6140	Weber sd; Penn	Sw 443	30	1
		COLORADO—New Oil Pay							
Rio Blanco	Rangely	Continental's Dorothy Rooth 2, c sw sw 15-2n-103w	7-16-46	6121	6080- 6100	Shinarump cgl; Tri	F 840; 11/32"	38	1
		COLORADO—Oil Field Extensions							
Rio Blanco	Rangely	Algord Oil Co's Guiberson 1, c se ne 18-2n-102w, ½ mi n ext.	3-25-46	6575	6334- 6480	Weber sd; Penn	F 518; 5/8"	35	..
Rio Blanco	Rangely	Continental's Rooth 1, c nw sw 15-2n-103w, 1½ mi ne ext.	3-10-46	6816	6320- 6544	Weber sd; Penn	F 865	35	..
Rio Blanco	Rangely	Phillips Pet Co's Levison 1, se se 27-2n-102w, 1¼ mi e ext.	1-15-46	6416	5806- 5950	Weber sd; Penn	F 279	35	..
Rio Blanco	Rangely	Stanolind O & G Co's Coltharp 1, sw se sw 35-2n-102w, ½ mi se ext.	8- -46	6174	5624- 6174	Weber sd; Penn	F 348; 7/16"	35	..
		FLORIDA—Oil Field Extension							
Collier	Sunniland	Humble's Gulf Coast Realty Co 6, sw ne 19-48s-30e, 1 mi w ext.	5- -46	11578	11558-11578	Young (Glen Rose) dolo; L Cre	F 225; 1/4"	25.6	2
		ILLINOIS—New Oil Fields							
Clay	Flora, S.	Deep Rock's Given 1, nw nw se 4-2n-6e, 3 mi se Kenner pl.	2- 5-46	2988	2978- 2988	McClosky li; Miss	P 189	....	2
Clay	Hoosier	N. V. Duncan's J. Leonard 1-A, sw se ne 2-4n-7e	1-22-46	3007	2551- 2574	Cypress sd; Miss	P 145; 7 wtr	....	10
Clay	Hoosier, N.	Eason Oil Co's N. E. Gibson 1, sw nw sw 35-5n-7e, 1 mi nw Hoosier pl.	10- 8-46	2823	2808- 2815	Aux Vases sd; Miss	P 30	....	1
Clay	Stanford, S.	T. Blake Dickson's Howell 1, se sw sw 9-2n-7e	6-11-46	3205	2959- 2970	Aux Vases sd; Miss	P 175	....	15
Clinton	Beaver Creek, S.	J. L. Garard's Veiregge-Mahlandt Comm. 1, sw ne nw 7-3n-2w, 1¾ mi s of Beaver Creek pl.	10-22-46	1146	1139- 1145	Bethel sd; Miss	F 17; 43 wtr ½"	....	1
Clinton	Sandoval, W.	Paul Doran's Thomas 1, nw ne ne 13-2n-1w, 1¼ mi sw of Sandoval pl.	5-14-46	1423	1417- 1423	Cypress sd; U. Miss	P 22; 96 wtr	....	1
Coles	Cooks Mills, N.	Nolan's Coombs Est. 1, ne ne sw 23-14n-7e	6-11-46	1795	1771-	Rosiclare sd; Miss	P 12	....	1
Cumberland	Hidalgo, N.	Central Pipeline Co's S. Myers 1, 345 fr sl, 380 fr el nw sw 36-9n-9e	6-25-46	2776	2648- 2664	Rosiclare li; Miss	P 15	....	1
Cumberland	Lillyville	Nat'l Associated Pet. Co. Inc's Krogmann 1, nw ne se 31-9n-7e, about 12 mi s and w of Mattoon pl.	8-27-46	2454	2446- 2454	McClosky li; Miss	P 140	....	3
Gallatin	Junction, N.	J. Resnik et al's A. Valter 1, se se ne 3-9s-9e	10- 8-46	2749	2726-	Aux Vases sd; Miss	P 8; 24 wtr	....	1
Gallatin	Omaha, E.	Deep Rock's Pioneer Trust Bank 1, nw ne se 2-8s-8e, 2½ mi e of Omaha pl and 4½ mi s of Roland pl.	4-23-46	2980	2853- 2862	L O'Hara li; L Miss	P 19	....	1
Gallatin	Ridgway	Wiser Oil Co.'s Mitsdarffer 1, ne se nw 24-8s, 8e	9-17-46	2938	2838-	McClosky li; Miss	P 21	....	..
Jasper	Boos, E.	Secure Oil Co's C. L. Ireland 1, nw nw nw 11-6n-10e	11-12-46	2673	2657- 2672- 2673	Rosiclare li; Miss McClosky li; Miss	P 66; 4 wtr	....	2
Jasper	Wakefield	J. W. Rudy's Dewhirst 1, se ne se 16-5n-9e	10-29-46	3184	3122- 3125	Rosiclare li; Miss	P 40; 52 wtr	....	1
Jasper	Willow Hill, E.	Pure and Carter's Dodd 1, s sw ne 6-6n-11e, 2½ mi se Willow Hill pl.	2-26-46	2732	2642- 2650	McClosky li; Miss	P 100	....	4
Marion	Omega	P. Doran and Delta Drlg Co's A. A. Millican Est. 1, sw sw se 16-3n-4e, 7 mi fr Xenia pl.	12-31-46	2499	2488- 2499	McClosky li; Miss	P 59	....	1
Shelby	Clarksburg	Sohio Pet. Co's Flenner 1, se ne nw 17-10n-4e, abt 7 mi e of Lakewood pl.	8-13-46	1788	1774- 1788	Bethel sd; Miss	P 12; 16 wtr	....	1
Shelby	Shelbyville	W. R. Britton's Kensil Heirs 1, ne ne se 21-11n-4e, 5 mi fr Clarksburg pl.	12-17-46	1855	1830- 1845	Aux Vases sd; Miss	P 2; 3 wtr	....	1
Wabash	Browns, E.	Magnolia's W. J. Pfeiffer 1, se ne nw 11-2s-14w, 2¼ mi se of Browns pl.	10- 1-46	3050	2596- 2601	Cypress sd; Miss	P 12; 34 wtr	....	5
Wabash	Friendsville, Central	G. Engle's D. Wilkinson 1, se se se 14-1n-13w, 1 mi s of Friendsville, N. and w of Allendale pls.	9- 3-46	2344	2321- 2341	Bethel sd; Miss	P 40; 5 wtr	....	1
Wabash	Friendsville, N.	Heldt's C. Smith 1, nw nw se 12-1n-13w	6-25-46	2539	1644- 1650	Biehl sd; Penn	P 8	....	10
Wabash	Lancaster, Central	Sam Malis et al's W. Fite 1, n ne nw 7-1n-13w	11- 5-46	2824	2813- 2824	Rosiclare li; Miss	F 900	....	4
Wabash	Lancaster, S.	Sam Malis et al's W. L. Litherland 1, nw nw se 20, 1n-13w, 2½ mi s of Lancaster pl.	10- 1-46	2809	2720- 2732	McClosky li; Miss	P 160; 10 wtr	....	1
Wabash	Maud, N.	Hayes & Wolfe's L. Smith 1, nw nw sw 17-1s-13w, abt 3 mi fr nearest prod.	10- 8-46	2806	2606-	Bethel sd; Miss	P 26; 25 wtr	....	5
Washington	Richview	National Consumers, Inc's Koelling-Pitchford Unit 1, nw sw se 10-2s-1w.	8- 6-46	1532	1520- 1527	Cypress sd; Miss	P 31	....	1

[1] "Completion horizon" indicates depth interval from which production came in discovery well. [2] Character of producing formations abbreviated thus: ch, chalk; dolo, dolomite; li limestone; sd, sandstone; sh, shale; ser, serpentine; cgl, conglomerate. Ages of formations abbreviated thus: Plels, Pleistocene; Plio, Pliocene; Mio, Miocene; Olig, Oligocene; Eoc, Eocene; U. Cre, Upper Cretaceous; L. Cre, Lower Cretaceous; Jur, Jurassic; Tri, Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Miss, Lower Mississippian; Devo, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian. [3] Barrels of oil per day (24 hr. rate) flowing (F), pumping (P), swabbing (Sw), or bailing (B); or million cubic feet of gas daily open flow capacity; size of choke given in inches. [4] This final column shows number of producing wells at end of 1946 in the new field new pay zone, or extension area opened by the productive exploratory well listed.

County	Field	COMPANY, WELL AND LOCATION	Date Completed	Total Depth (Feet)	[1]Completion Horizon (Feet)	[2]Name, Character and Age of Producing Formation	[3]Initial Production: Method and Choke	Gravity of Oil	[4]Prod. Wells Year End
		ILLINOIS—New Oil Fields—(Continued)							
Wayne	Covington, E.	K & B Drilling Co's Smith 1, w sw ne 21-1s-7e	8-13-46	3323	3144- 3160	Aux Vases sd; Miss	P 73	....	8
Wayne	Massilon	Texas Co's E. Hines "C" 1, se se se 1-1s-9e, 4½ mi fr nearest prod.	12-10-46	3262	3254- 3262	L. O'Hara li; Miss	P 192	....	1
White	Concord, N.	C. E. Brehm et al's J. R. Callicotte 1, se se nw 10-6s-10e	10-15-46	2960	2950- 2960	Aux Vases sd; Miss	P 248	....	4
White	Crossville	Inland Producers' Rister 1, se ne ne 15-4s-10e	10-15-46	3164	3123- 3133	McClosky li; Miss	P 18; 10 wtr	....	1
White	Epworth, E.	W. O. Allen's Hanna Bros. 1, nw ne se 28-5s-10e	6-11-46	2743	2706- 2728	Cypress sd; Miss	P 50	....	2
		ILLINOIS—New Oil Pays							
Clay	Hoosier	N. V. Duncan's Nannie Gibson 1, nw nw se 2-4n-7e	5-28-46	2984	2894- 2902	Rosiclare li; L Miss	P 264	....	3
Clay	Hoosier	K & B Drilling Co's Stanley 1, nw se se 11-4n-7e	7-30-46	3003	2842- 2868	Aux Vases sd; U Miss	P 55; 125 wtr	....	1
Clay	Ingraham, W.	Cities Service's W. H. Wyatt 1, se nw sw 13-5n-7e	1-15-46	2950	2842- 2847	Rosiclare (Ste. Genevieve) sdy li; Miss	P & F 764	....	3
Clay	Ingraham, W.	Cities Service's Wyatt 5, ne nw sw 13-5n-7e	7- 9-46	2946	2762- 2772	Aux Vases sd; U Miss	P 150	....	1
Clay	Ingraham, W.	Kingwood's W. H. Wyatt 1, se ne se 14-5n-7e	2-12-46	2938	2680- 2700	Bethel sd; Miss	P 102; 94 wtr	....	2
Clay	Stanford, S.	Texas Co's E. Kitley 2, nw ne nw 16-2n-7e	9-10-46	3109	3097- 3109	McClosky li; Miss	P 33	....	3
Edwards	Cowling	G. H. Wickham's Schroeder 5, 430 fr sl, 380 fr el se ne 27-2s-14w	7- 9-46	2239	2226- 2236	Tar Springs sd; U Miss	P 50	....	2
Franklin	Benton	Shell's Doty 1, (OWWO) 334 fr nl, 977 fr wl nw ne 25-6s-2e	5-21-46	2162	1737- 1756	Degonia sd; U Miss	P 72; 146 wtr	....	2
Hamilton	Aden, S.	H. H. Weinert's Hall 1, ne nw nw 29-3s-7e	6-11-46	3446	3249- 3290 3335- 3347	Aux Vases sd; Miss Rosiclare li; Miss	P 26; 80 wtr	....	1
Hamilton	Thackeray	Ryford Oil Co's V. Johnson "A" 1, (OWDD) ne sw se 10-5s-7e	6-25-46	3550	3535- 3550	McClosky li; Miss	P 128; 10 wtr	....	1
Hamilton	Thackeray	Ryford Oil Co's V. Johnson 3, (OWDD) sw nw se 10-5s-7e	7-23-46	3598	3459- 3470	L O'Hara li; L Miss	P 19; 16 wtr	....	1
Jasper	Newton	J. W. Menhall's James Eaton 1, nw nw nw 13-6n-9e	9-10-46	2943	2939- 2943	Rosiclare li; Miss	P 168	....	1
Jasper	Willow Hill	Secure Oil Co's L. Mascher 1, ne ne ne 3-6n-10e	12-10-46	2673	2661- 2673	Rosiclare li; Miss	P 255	....	1
Jefferson	Markham City, W.	W. C. E. Brehm et al's Modglin 1, sw nw se 34-2s-4e	5-14-46	3092	3061- 3065	McClosky li; L Miss	P 12; 50 wtr	....	12
Richland	Noble, N.	Pure Oil Co's L. A. Wasson 3, nw sw se 27-4n-9e	6-11-46	2990	2958- 2990	Rosiclare sd; Miss	P 60; 19 wtr	....	1
Richland	Olney, E.	Texas Co's R. Scherer 2, ne sw se 23-4n-10e	10- 8-46	3062	3048- 3052 3053- 3062	L O'Hara li; Miss Rosiclare li; Miss	P 16	....	1
Wabash	Browns	Gilliam & Aspin's H. L. Hering 1, ne ne sw 27-1s-14w	11-12-46	2971	2965- 2970	L O'Hara li; Miss	P 240	....	2
Wabash	Mt Carmel	First Nat'l. Pet. Trust's Shaw-Courter 2-A, se ne se 7-1s-12w	7- 2-46	1390	1376- 1390	Bridgeport sd; Penn	P 13	....	1
Wayne	Covington, E.	Tex Harvey's Marshall Smith 1, se ne nw 21-1s-7e	10- 8-46	3260	3208-	L O'Hara li; Miss	P 60; 10 wtr	....	1
Wayne	Geff	Robinson & Puckett's Haymes 1, se nw ne 1-1s-7e	10- 1-46	3188	3140- 3145	L O'Hara li; Miss	P 5	....	1
Wayne	Keenville	Wiser's Keen 1, se se ne 28-1s-5e	7- 9-46	3129	3060- 3068	L O'Hara li; Miss	P 150; 75 wtr	....	2
White	Epworth, E.	W. O. Allen's J. Williams 1, nw nw ne 33-5s-10e	9-10-46	3126	3002- 3017	Aux Vases sd; Miss	P 24; 36 wtr	....	1
White	Herald	Oil Management, Inc's J. J. Harrell 1, se sw nw 14-7s-9e	10- 8-46	2972	2962- 2972	L O'Hara li; Miss	P 243	....	2
White	Herald	Pure Oil Co's Austin Consol. "B" 1, se nw nw 34-6s-9e	6- 4-46	3160	3005-	Rosiclare li; Miss	P 37; 61 wtr	....	2
White	Stokes-Brownsville	Winfrey Drilling Co's Manley 2, sw nw ne 17-6s-9e	10- 8-46	2100	2085- 2100	Palestine sd; Miss	P 10; 12 wtr	....	1
White	Storms	Sinclair and Ohio's H. Aldrich (Loridge) 1, nw se se 1-6s-9e	4-30-46	2366	2361- 2365	Tar Springs sd; Miss	P 42	....	3
White	Storms	Sinclair Prairie and Ohio's Riecken 2, nw nw se 1-6s-9e	5-21-46	3030	3015- 3030	Aux Vases sd; U Miss	P 220; 10 wtr	....	1
White	Trumbull	W. I. Lewis et al's Nibling 1, se sw se 7-5s-9e	11-12-46	3270	3260- 3267	Rosiclare li; Miss	P 146; 10 wtr	....	..
White	Trumbull	Pure Oil Co's W. T. Hall 1, ne ne nw 19-5s-9e	7-30-46	3158	3150- 3158	Aux Vases sd; U Miss	P 57; 13 wtr	....	4
		ILLINOIS—Oil Field Extensions							
Christian	Mt. Auburn	Wrather's Thompson 1, se se se 15-15n-2w, 1½ mi n ext	4- 9-46	1896	1870- 1877	Silurian li; Sil	P 31; 42 wtr	....	..
Clay	Clay City, Consol.	Robinson & Puckett's Sam Bates 1, sw se sw 14-2n-8e, ½ mi ext	10- 1-46	3035	3018-	Rosiclare li; Miss	F 1322	....	..
Clay	Hoosier	K-B Drlg. Co's Hastings 1, sw se sw 12-4n-7e, 1½ mi s ext	4-30-46	2638	2603- 2621	Cypress sd; Miss	P 25	....	..
Clay	Hoosier	Robinson & Puckett's Roley 1, ne sw se 11-4n-7e, ¾ mi w ext	6-25-46	2934	2916- 2934	Rosiclare li; Miss	P 205	....	..
Clay	Ingraham, W.	Brinkerhoff Drlg Co's O. A. Barlow 2, se sw sw 11-5n-7e, ½ mi nw ext.	11-19-46	2539	2515-	Cypress sd; Miss	P 165	....	..
Clay	Ingraham, W.	Gilliam & Aspin Drlg. Co's H. D. Lewis 1, ne ne se 15-5n-7e, 1 mi fr Bible Grove fld, ¾ mi n ext.	8-27-46	2941	2870- 2876	McClosky li; Miss	P 15; 35 wtr	....	..
Clay	Mason, S.	P. D. Lynch's Wright 1, se ne ne 3-5n-5e, ¾ mi s ext	9-24-46	2521	2439- 2450 2425- 2435	McClosky li; Miss Rosiclare li; Miss	P 28; 1 wtr	....	..
Clay	Sailor Springs Consol.	K & B Drlg. Co's Patton 1, sw nw se 21-3n-7e, ¾ mi s ext	7- 9-46	3080	2801- 2810	Bethel sd; U Miss	P 8; 25 wtr	....	..
Clay	Stanford, S.	J. W. Rudy's O. Tackett 1, ne se ne 8-2n-7e, ½ mi n ext	9-10-46	3087	3080- 3087	McClosky li; Miss	P 11; 12 wtr	....	..
Clinton	Bartelso, W.	E. Goldschmidt's Loepker 1, nw nw ne 19-1n-3w, ½ mi ext	10- 1-46	963	938-	Cypress sd; Miss	P 10; 15 wtr	....	..
Coles	Mattoon	National Consumer's Arthur 1, sw nw ne 2-12n-7e, 1 mi n ext	2-26-46	1962	1942- 1962	Rosiclare sd; Miss	P 22; 27 wtr	....	..
Edwards	Samsville, N.	Central Pipeline's Tarpley 2, 330 ft nl, 990 ft el, ne nw 31-1n-14w, ½ mi ext.	6-25-46	2940	2934- 2936	Bethel sd; Miss	P 70; 8 wtr	....	..
Hamilton	Bungay	Magnolia's Rohrer 1, nw ne sw 23-4s-7e	6-11-46	3290	3273- 3286	Aux Vases sd; Miss	P 27; 3 wtr	....	..
Hamilton	Springerton	Sohio's Thomas 1, sw sw se 11-4s-7e, ¾ mi n ext	2-19-46	3504	3263- 3270	Aux Vases sd; Miss	P 8; 1 wtr	....	..
Jasper	Boos, N.	J. J. Lynn's Houser-Sears 1, se se nw 21-6n-10e, ¾ mi e ext	11-19-46	2812	2800- 2812	McClosky li; Miss	P 117	....	..
Jasper	Willow Hill	J. J. Lynn's Hippler 1, nw nw se 27-7n-10e, 1 mi n ext	4-23-46	2776	2668- 2673	McClosky li; Miss	P 60	....	..
Jefferson	Markham City, W.	Gulf Oil Co's Green 1, nw sw nw 10-3s-4e, ½ mi s ext	9-17-46	3056	3031-	McClosky li; Miss	P 128; 15 wtr	....	..
Lawrence	Lawrence	Zanetis' American Nat'l. Bank 1, nw ne sw 23-3n-11w, ¾ mi se ext	7-23-46	1942	1886- 1900	McClosky li; L Miss	P 18; 3 wtr	....	..
Lawrence	St. Francisville, E.	J. Bauer et al's Brevoort 1, se ne sw 10-2n-11w, 1½ mi n ext	9-10-46	1852	1701- 1740	Bethel sd; Miss	P 10	....	..
Madison	Marine	G. T. Loper's M. Reding 1, nw nw nw 14-4n-6w, ½ mi e ext	11- 5-46	1793	1759-	Silurian li; Sil	P 80; 170 wtr	....	..
Richland	Calhoun	Pure's Howard 1, ne ne se 13-2n-9e, ½ mi s ext	4- 9-46	3170	3147- 3151	McClosky li; Miss	F 1305	....	..
Richland	Gallagher	Pure's Gallagher 1, sw sw sw 12-2n-9e, ¾ mi n ext	4- 9-46	3181	3166- 3174	McClosky li; Miss	F 786	....	..
Richland	Parkersburg Consol.	A. J. Slagter's Fisher 1, se nw sw 4-2n-14w, ½ mi ne ext	9-10-46	3150	3125- 3143	McClosky li; Miss	P 6; 60 wtr	....	..
Wabash	Browns, E.	Magnolia Pet. Co's J. Hirschelman Unit 1, ne nw ne 14-2s-14w, ¾ mi s ext.	12-31-46	2582	2575- 2582	Cypress sd; Miss	P 300	....	..
Wabash	Friendsville, N.	S. H. Levitt et al's Al L. Gher 1, 474 ft s, 330 ft e, se se 1-1n-13w, 5/8 mi ne ext.	7-23-46	1621	1607- 1618	Biehl sd; Penn	P 83	....	..
Wabash	Maud, N.	Hayes & Wolfe's L. E. Meyer 1, sw sw nw 8-1s-13w, 1 mi n ext	11- 5-46	2578	2550-	Bethel sd; Miss	P 140	....	..
Wayne	Cisne	J. J. Lynn's Dye 1, n nw nw 2-1s-7e, ¾ mi se ext	3-12-46	3166	3148- 3159	McClosky li; Miss	F 256	....	..
Wayne	Clay City Consol.	Ill. Mid-Continent's H. Miller 1, sw se nw 13-1n-7e, ¾ mi s ext	9-17-46	3148	3108- 3119	Rosiclare li; Miss	P 30; 70 wtr	....	..
Wayne	Clay City Consol.	McCall and Cline Drlg. Co's Atterberry 1, nw nw se 14-1n-7e, ¾ mi ext.	12-17-46	3140	3016- 3030	Aux Vases sd; Miss	P 8; 24 wtr	....	..
Wayne	Clay City Consol.	Nash Redwine's M. A. Brown 1, (OWWO) n nw ne 31-2n-9e, ½ mi ext.	11-19-46	3109	3059-	McClosky li; Miss	P 6	....	..
Wayne	Clay City Consol.	Nash Redwine's C. E. Downer 1, sw sw se 31-1n-8e, ½ mi ext	7- 9-46	3216	3122- 3128	L O'Hara li; L Miss	P 115	....	..
Wayne	Clay City Consol.	A. J. Slagter's (Robinson & Puckett) Crisman1, ne sw sw 32-1n-8e, 5/8 mi ext.	7-16-46	3153	3054- 3068	Aux Vases sd; U Miss	P 277	....	..

[1] "Completion horizon" indicates depth interval from which production came in discovery well. [2] Character of producing formations abbreviated thus: ch, chalk; dolo, dolomite; ll, limestone; sd, sandstone; sh, shale; ser, serpentine; cgl, conglomerate. Ages of formations abbreviated thus: Pleis, Pleistocene; Plio, Pliocene; Mio, Miocene; Olig, Oligocene; Eoc, Eocene; U. Cre, Upper Cretaceous; L. Cre, Lower Cretaceous; Jur, Jurassic; Tri, Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Miss, Lower Mississippian; Devo, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian. [3] Barrels of oil per day (24 hr. rate) flowing (F), pumping (P), swabbing (Sw), or bailing (B); or million cubic feet of gas daily open flow capacity; size of choke given in inches. [4] This final column shows number of producing wells at end of 1946 in the new field, new pay zone, or extension area opened by the productive exploratory well listed.

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SALIENT DATA ON PRODUCTIVE EXPLORATORY WELLS COMPLETED IN U. S. IN 1946

County	Field	COMPANY, WELL AND LOCATION	Date Completed	Total Depth (Feet)	[1]Completion Horizon (Feet)	[2]Name, Character and Age of Producing Formation	[3]Initial Production: Method and Choke	Gravity of Oil	[4]Prod. Wells Year End
		ILLINOIS—Oil Field Extensions—(Continued)							
Wayne	Clay City-Consol.	A. J. Slagter's Gray 1, se se se 16-1s-8e, ½ mi s ext.	9-10-46	3281	3104- 3117	Aux Vases sd; Miss	P 38	....	..
Wayne	Clay City-Consol.	A. J. Slagter's R. Pierce 1, ne ne se 22-2n-8e, ¾ mi e ext.	8-27-46	3052	3034- 3050	McClosky li; Miss	F 432	....	..
Wayne	Clay City-Consol.	A. J. Slagter's Trotter 1, sw se ne 20-1n-8e, ¾ mi s ext.	8-27-46	3100	3096- 3100	McClosky li; Miss	P 66; 7 wtr	....	..
Wayne	Covington, E.	Ben Nation's Gallagher 1, ne sw nw 16-1s-7e, 1 mi n ext.	10-15-46	3236	3219- 3236	McClosky li; Miss	P 10; 50 wtr	....	..
Wayne	Goldengate Consol.	Perry Fulk's L. B. Ellis 1, s nw nw 29-2s-9e, ¾ mi ext.	12- 3-46	3477	3447- 3457	Rosiclare li; Miss	P 30; 25 wtr	....	..
Wayne	Johnsonville, W.	Deep Rock Oil Co's U. S. Spicer 1, sw sw ne 25-1n-5e, ¾ mi s ext.	5- 7-46	3086	3072- 3075	McClosky li; L Miss	P 12	....	..
Wayne	Johnsonville, W.	Deep Rock's Ulysses 1, ne nw nw 30-1n-6e, ¾ mi e ext.	7- 2-46	3178	3151- 3157	McClosky li; Miss	P 71	....	..
Wayne	Keenville	E. L. Markham's Keeler-Ellis 1, ne se sw 21-1s-5e, ¾ mi nw ext.	7-30-46	3126	3118- 3124	McClosky li; L Miss	P 29; 9 wtr	....	..
Wayne	Keenville--	Mitchell's Cornstubble 1, sw sw sw 27-1s-5e, ¾ mi nw ext--	2-12-46	2973	2960- 2968	Aux Vases sd; Miss	P 175; 300 w	....	..
White	Brownsville--	McBride's Pryor 1, sw sw se 32-5s-9e, ½ mi e ext.	2-26-46	3180	3099- 3107	L O'Hara li; Miss	P 5; 20 wtr	....	..
White	Brownsville--	Pure's Adams "A" 1, ne nw se 6-6s-9e, ½ mi s ext----	2-19-46	3170	3097- 3125	Rosiclare li; Miss	P 100; 118 wtr	....	..
White	Herald	Oil Management, Inc's Williams 1, nw ne sw 14-7s-9e, ½ mi ext.	8-27-46	2882	2863- 2868	Aux Vases sd; Miss	P 108; 2 wtr	....	..
White	Iron	Nat'l. Assoc. Pet's Fisher 1, sw ne sw 13-6s-8e, ½ mi ne ext.	7- 2-46	2339	2328- 2337	Tar Springs sd; Miss	P 84; 20 wtr	....	..
White	Maunie, N.-	J. W. Thompson's E. Bruggen 1, (OWWO) ne nw sw 13-5s-10e, 1 mi n ext.	10- 1-46	3207	3192- 3207	McClosky li; Miss	P 20	....	..
White	New Harmony-Griffin Cons.	Superior Oil Co's H. C. Ford 27, nw sw ne 8-5s-14w, abt ¾ mi ext.	8-20-46	3007	2949- 2961	McClosky li; Miss	P 400	....	..
White	Roland---	Sun's Okerson 1, nw sw ne 9-7s-8e, 1 mi nw ext.	4-23-46	3114	3096- 3102	McClosky li; Miss	P 12; 36 wtr	....	..
White	Stokes	Pure Oil & Carter's E. S. Munsey 1, ne ne nw 8-6s-9e.	1-15-46	3205	2555- 2567	Hardinsburg sd; Miss	P 169	....	..
White	Storms	Sinclair and Ohio's S. E. Holderby 4, ne ne se 12-6s-9e, ½ mi ext.	12-31-46	3141	2251- 2259 2320- 2323	Waltersburg sd; Miss Tar Springs sd; Miss	P 9; 20 wtr	....	..
White	Trumbull	W. I. Lewis' Bingham 1, sw nw sw 17-5s-9e, ½ mi ne ext.	8-27-46	3173	3162- 3166	Aux Vases sd; Miss	P 65; 144 wtr	....	..
		ILLINOIS—New Gas Field							
Morgan	Waverly	L. M. Ladet's Stenemeyer 1, nw nw ne 22-13n-8w.	8-12-46	265	250- 265	Pennsylvanian sd; Penn	1.7 mln	....	1
		ILLINOIS—New Gas Pay							
Morgan	Waverly	L. M. Ladet's G. S. McMahan 1, 22-13n-8w, 330 fr nl, 330 fr el.	12-17-46	1543	980- 991	Devonian li; Devo	1.3 mln	....	1
		ILLINOIS—Gas Field Extension							
Bond	Panama	Bond County Gas Co's Harwood 2, se ne sw 36-7n-4w, 2 mi e ext.	12- 2-46	753	735- 750	Pennsylvanian sd; Penn	2 mln	....	..
		INDIANA—New Oil Fields							
Gibson	Grand Rapids	Illinois-Mid-Continent Oil Co's Parkinson 1, sw ne nw 24-1s-12w	5- -46	2090	2080- 2090	Benoist sd; Miss	P 90	36	1
Gibson	Princeton, N.	Eldon Hayden's Crecelius 2, sw sw 5-2s-10w.	9-28-46	2080	2075- 2080	McClosky li; Miss	P 50	....	2
Pike	Union Bowman (new)	W. L. Lichlyter et al's Gerald Wirey 1, sect 9, 1s-9w, Clay twp.	4- 7-46	1396	1388- 1396	Cypress sd; U Miss	P 10	35	3
Posey	New Harmony, E	Calvert and Willis' Wiley 1, sw sw ne 18-5s-13w.	10- -46	2984	2974- 2984	McClosky li; Miss	P 226	37	2
Posey	Springfield.	H. E. Ledbetter et al's N. Utley 1, se nw sw 3-5s-13w.	5- -46	3011	3006- 3011	McClosky li; L Miss	P 18	....	1
Posey	Springfield, N.	F. A. Calvert's Fretageat 1, ne nw se 24-5s-14w.	6-15-46	2022	2004- 2022	Palestine sd; Miss	P 235	....	9
		INDIANA—New Oil Pays							
Gibson	Lysle	Deep Vein Coal Co's Smith 2, sw se ne 1-2s-12w.	1- -46	2316	2302- 2316	McClosky li; Miss	P 98	36.5	3
Gibson	Mt. Carmel, E.	Ryan Oil Co's Clift Heirs 1, sw se sw 23-1s-12w.	2- -46	1668	1649- 1668	Tar Springs sd; Miss	P 15	38	19
Posey	New Harmony, S	Delta Drlg. Co's Elliott 12-A, 23-5s-14w.	5- -46	1365	1318- 1365	Pennsylvanian sd; Penn	P 200	39.5	58
		INDIANA—Oil Field Extensions							
Gibson	Wheeling	W. L. Lichlyter's Johnson 1, ne ne se 9-1s-9w.	2- -46	1404	1394- 1404	Oak City sd; Miss	P 30	38	1
Pike	Union-Bowman	W. L. Lichlyter's Conley 1, ce½ sw nw 3-1s-9w, 1 mi w ext.	5- -46	1058	1055- 1058	Waltersburg sd; U Miss	P 120	35	2
Posey	Farmersville	Paul Rossi's Rippey 1, se se nw 30-6s-13w, 1 mi s ext.	7- -46	2480	1431- 1453	Pottsville sd; Penn	P 51	29.5	1
Posey	Griffin	Fox and Fox's Milton Andry 1, se sw nw 10-4s-14w.	4-10-46	2980	2110- 2117	Tar Springs sd; U Miss	P 150	30-38	4
Wabash	Rich Valley	Joseph Minneci's Votaw 1, ne ne 12-27n-5e.	8-30-46	874	858- 870	Trenton li; Ord	P 25	36	1
		INDIANA—New Gas Field							
Fayette	Trenton	J. Harvey Snider et al's Asher Sizemore 1, sect 15, 13n-11e, Orange twp.	4- -46	1084	1074— 1084	Trenton li; Ord	.02 mln	....	1
		KANSAS—New Oil Fields							
Barber	Boggs	Skelly Oil Co's Boggs 1, sw ne ne 17-33s-12w, 2 mi e of Medicine Lodge gas fld.	7-27-46	4842	4824- 4842	Simpson sd; Ord	F 47; 1.4 mln	39	1
Barber	Boggs, S.	Continental Oil Co's Smith 1, nw nw nw 21-33s-12w, 4 mi e of Medicine Lodge pl.	12-10-46	4895	4848- 4895	Simpson sd; Ord	F 1200; 1 mln	27	1
Butler	Hickory Creek	Nadel & Gussman's Crowley 1, sw sw se 11-28s-5e, betw Weaver and Fox-Bush pls.	3-15-46	2738	2700- 2738	Bartlesville sd; Penn	P 75	41	14
Butler	Salter-Simpson	J. P. Gaty's Schowalter 1, ne nw sw 23-28e-3e, 3 mi w of Augusta pl.	7-16-46	3003	3001- 3003	Simpson sd; Ord	B 30	....	3
Butler	Shinn	K. T. Weidemann's Shinn 1, sw sw ne 19-29s-8e, 4 mi e Brandt-Sensenbaugh pl.	12-11-46	2773	2730- 2773	Mississippi chat; Miss	P 30	....	1
Cowley	Rainbow Bend, N.E.	W. L. Hartman et al's Smith 1, se se sw 15-33s-3e, ¾ mi e of Rainbow Bend pl.	1-12-46	4265	3259- 3262	Bartlesville sd; Penn	P 75	....	1
Cowley	.....	B. B. Blair's Miller 1, nw nw se 15-32s-5e, 1 mi w Frog Hollow pl.	12-12-46	3096	3040- 3096	Bartlesville sd; Penn	P 6	....	1
Ellis	Burnett, S. W.	Masda Oil Co's Henderson 1, ce½ se ne 22-11s-18w, 2 mi w of Barnett pl.	6-15-46	3636	3633- 3634	Arbuckle li; Ord	Sw 1200	....	5
Ellis	Catherine, S.	The Texas Co's Dreiling 1, sw sw sw 15-13s-17w, 2 mi s of Catherine pl.	11-26-46	3583	3560- 3583	Arbuckle li; Ord	F 559	....	1
Ellis	Pleasant, N.	J. C. Farley's Wiesner 1, se se se 26-13s-20w, 1 mi nw of Pleasant pl.	11-15-46	3815	3808- 3815	Arbuckle li; Ord	P 10	....	9
Ellis	Schoenchen	W. N. Bartlett et al's Engle 1, ne ne se 21-15s-18w, betw Ruder and Madden pls.	6-28-46	3574	3570- 3574	Arbuckle li; Ord	Sw 312	....	3
Ellis	.....	Gulf Oil Corp's Zimmerman 1, sw sw nw¼ 22-15s-18w, 2 mi s of Ruder.	10-22-46	3598	3581- 3598	Arbuckle li; Ord	F 714	....	1
McPherson	Bitikofer	J. M. Huber Corp's Sinclair 1, sw of 29-19s-1w, 2 mi se of Canton	6- 6-46	2950	2899- 2922	Mississippi li; Miss	F 168; 2 mln	....	5
Pawnee	Rutherford	Brack & Huber's Rutherford 1, sw ne nw 8-20s-16w, 10 mi n of Pawnee.	8- 3-46	3823	3817- 3823	Arbuckle li; Ord	P 122	....	4
Phillips	Logan	Helmerich & Payne's Bowman 1-A, nw nw se 3-5s-20w, abt 3 mi n of Hanson pl.	3- 7-46	3554	3149- 3176	Lansing li; Penn	F 201	41	4
Pratt	Chance	Lion Chemical Co's Chance 1, nw nw nw 4-27s-13w, 2 mi nw of Iuka pl.	9- 5-46	4490	4432- 4440	Arbuckle li; Ord	F 203	34.3	[illegible]4

[1] "Completion horizon" indicates depth interval from which production came in discovery well. [2] Character of producing formations abbreviated thus: ch, chalk; dolo, dolomite; ll, limestone; sd, sandstone; sh, shale; ser, serpentine; cgl, conglomerate. Ages of formations abbreviated thus: Pleis, Pleistocene; Plio, Pliocene; Mio, Miocene; Olig, Oligocene Eoc, Eocene; U. Cre, Upper Cretaceous; L. Cre, Lower Cretaceous; Jur, Jurassic; Tri, Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Miss, Lower Mississippian; Devo, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian. [3] Barrels of oil per day (24 hr. rate) flowing (F), pumping (P), swabbing (Sw), or bailing (B); or million cubic feet of gas daily open flow capacity; size of choke given in inches. [4] This final column shows number of producing wells at end of 1946 in the new field, new pay zone, or extension area opened by the productive exploratory well listed.

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and Scraper

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Fig. 600 A
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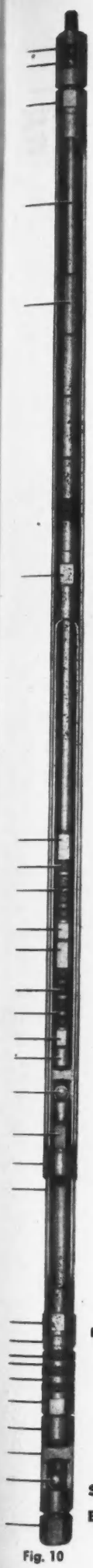

Fig. 10

Fig. 200

Fig. 300

THOMPSON PUMP CO.

OKMULGEE, OKLAHOMA

SALES & SERVICE STORES

Seminole, Okla. Kilgore, Texas
Edmond, Okla. Oil City, Miss.
Vivian, La.

SUPPLY STORE STOCKS

Happy Co., Salem, Illinois ■ John T. King Co., Pampa, Texas ■ Mid Way Pipe & Supply Co., Gladewater, Texas ■ Jack Yates Pipe & Supply Co., Gladewater, Texas ■ Jarecki Mfg. Co., Benton & Carmi, Illinois; Abilene & Odessa, Texas ■ B-H Pump Service, Selman City, Texas

SALIENT DATA ON PRODUCTIVE EXPLORATORY WELLS COMPLETED IN U. S. IN 1946

County	Field	COMPANY, WELL AND LOCATION	Date Completed	Total Depth (Feet)	[1]Completion Horizon (Feet)	[2]Name, Character and Age of Producing Formation	[3]Initial Production: Method and Choke	Gravity of Oil	[4]Prod. Wells Year End
		KANSAS—New Oil Fields—(Continued)							
Pratt		Bridgeport Oil Co's Pride 1, ne ne ne 24-29s-13w, 1 mi n of Sawyer pl.	9-24-46	4490	4483- 4490	Viola li; Ord	F 164	....	1
Pratt		Huber & Hatfield's Shanley 1, ne ne 30-27s-13w, 4 mi sw of Iuka pl.	1-29-46	4056	3858- 4056	Lansing li; Penn	Sw 25; 150 wtr	....	1
Rice	Cow Creek	Phil-Han Oil Co's Chase 1, nw ne nw 28-18s-9w, 1½ mi w of Rickard pl.	10-22-46	3255	3249- 3250	Arbuckle li; Ord	F 100; 100 w	....	1
Rice	Proffitt	Lauck-Moncrief's Logan 1, se sw se 12-20s-10w, 1 mi w of Chase, S. pl.	1-12-46	3294	3287- 3294	Arbuckle li; Cam	P 25	38	14
Rooks	Alcona	Republic Nat. Gas Co's Cooper 1, se se se 14-7s-20w, abt 6 mi nw of Webster.	5-10-46	3539	3499- 3509	Arbuckle li; Cam	P 45; 10 wtr	....	1
Rooks	Barry, S.E.	H. H. & B. Drlg. Co. et al's Hilgers 1, ne ne ne 13-9s-19w, 1 mi se of Barry pl.	10-13-46	3484	3479 -3484	Arbuckle li; Ord	F 2735	....	3
Rooks	Nyra	Atlantic Refining's Carmichael 1, c se ne 16-9s-17w, abt 2 mi w of Westhusin pl.	3-28-46	3547	3429 -3435	Lansing li; Penn	P 45; 20 wtr	....	3
Rooks	Webster	Bird & Boering's Veverka 1, sw sw 27-8s-19w, abt 1½ mi nw of Barry pl.	3- 2-46	3409	3403- 3409	Arbuckle li; Cam	Sw 648	38	6
Rush	Albert, W.	Darby-Bothwell, Inc's Wagner 1, nw ne ne 28-18s-16w, 1½ mi w of Albert pl.	5-12-46	3644	3623- 3644	Reagan sd; Cam	P 45	41	1
Rush	Ryan, W.	Magnolia Pet. Co's Tammen 1, se se se 33-19s-16w, 1½ mi w w of Ryan pl.	9- 6-46	3756	3734- 3756	Arbuckle li; Ord	P 31	....	1
Saline	Saline, S.	L. Walker's Hagge 1, nw sw se 32-14s-2w, abt 2 mi se of Saline pl.	5-24-46	3252	3246- 3252	Viola li; Ord	P 91	....	1
Sedgwick	Hinkle	Beech Aircraft Corp's Hinkle 2, se ne ne 1-27s-1e, 1¾ mi ne of Wichita.	4-25-46	2995	2992- 2995	Burgess sd; Penn	P 828	39	2
Stafford	Gray	Alkay Oil Co's Gray 1, sw ne ne 11-24s-13w, 2 mi n of St. John pl.	4-30-46	3882	3743- 3762	Lansing li; Penn	P 480	38	3
Stafford	Kipp, N.E.	Cities Service Oil Co's Kipp 1, ne ne ne 23-25s-14w, abt 3 mi nw of McAndless pl.	5-21-46	4303	3844- 3863	Viola li; Ord	P 260	39.5	3
Stafford	Saundra	Virginia Drlg. Co. et al's Roberts 2, cwl sw sw 14-21s-12w, 2½ mi nw of Sittner pl.	9- 6-46	3569	3546- 3569	Arbuckle li; Ord	P 109	....	2
Stafford		Coralena Oil Co's Shank 1, sw nw nw 12-24s-13w, 2 mi ne of St. John's pl.	7- 5-46	3757	3738- 3757	Viola li; Ord	P 473; 32 wtr	....	1
Stafford		H. A. Hershfield et al's Shirk 1, se se ne 35-24s-14w, abt 2 mi s Richmond pl.	5-15-46	4274	3775- 3798	Viola li; Ord	P 120	....	1
Sumner	Margaret	Ashland O & R Co's James 1, nw sw ne 36-32s-2e, 2½ mi nw of Thurlow pl.	4-10-46	3476	3469- 3476	Arbuckle li; Cam	P 60	38	6
Trego	Hille	Republic Natural Gas Co's Hille 1, se se sw 23-15s-24w, 6 mi ne of the Arnold pl.	6-18-46	4316	4293- 4316	Mississippi li; Miss	Sw 156	....	1
Wilson		Ruth Lane et al's Campbell 1, se se se 19-28s-15e, 3 mi w of Guilford pl.	12-11-46	1529	1423- 1453	Bartlesville sd; Penn	P 30	....	1
		KANSAS—New Oil Pays							
Barber	Skinner	Sinclair-Prairie Oil Co's Oldfather 1, cse½ 7-31s-14w, in skinner pl	3-27-46	4495	4422- 4426	Simpson sd; Ord	F 3000	41	1
Marion	Lehigh	Anderson-Prichard Oil Corp's Weyland 1, se nw sw 27-19s-1e.	12-14-46	3291	3289- 3291	Simpson sd; Ord	Sw 239	....	1
Mcpherson	Paden	Anderson-Prichard Oil Co's Schuls 5, ne nw nw 15-18s-1w.	8-16-46	3156	3151- 3156	Viola li; Ord	Sw 232	....	4
Ness	Arnold	Sohio Pet. Co's Drake 1, nw sw nw 26-16e-25w, in Arnold pl.	4- 5-46	4523	4445- 4452	Fort Scott li; Penn	P 275	38	1
Pratt	Chance	Lion Chemical Co's Lemon 2, ne sw sw 33-26s-13w, 2 mi nw of Iuka pl.	9-18-46	4443	4338- 4346	Simpson sd; Ord	P 400	....	2
Rooks	Stockton	Alkay Oil Co's Hindman 1, nw nw ne 35-7s-17w, 4½ mi se of Stockton.	7-24-46	2717	2675- 2717	Topeka li; Penn	F 107	....	2
		KANSAS—Oil Field Extensions							
Barton	Feltes	Phil-Han Oil Co's Schauf 1, se sw nw 10-16s-12w, ½ mi sw ext.	3- 1-46	3304	3109- 3113	Lansing li; Penn	P 215	39	2
Barton	Klug	Black-Marshall's Klug 1, se se se 28-17s-13w	6-19-46	3421	3414- 3421	Arbuckle li; Ord	P 52	38	1
Barton	Merten	E. M. Hilton et al's Schultz 1, ne ne ne 8-19s-15w, 1 mi w ext.	4-23-46	3582	3575- 3582	Reagan sd; Cam	P 144	....	5
Barton	Merten, W.	Crown Oil Co's Arnold 1, ne ne nw 8-19s-15w, ½ mi w ext.	6- 6-46	3638	3634- 3638	Reagan sd; Cam	Sw 120	....	13
Cowley	Couch	Ed Adair & Harvey Blair's Sandstrum 1, ne ne ne 14-30s-5e, ½ mi w ext.	2- 1-46	2824	2764- 2824	Bartlesville sd; Penn	P 200	....	17
Cowley	Deichman	Ben Gralapp's Deichman 1, ne se nw 23-31s-4e, ½ mi w ext.	2- 9-46	2971	2930- 2971	Bartlesville sd; Penn	F 300	38	3
Cowley	Rahn	Continental's Cox 1, nw se nw 5-34s-6e, 1 mi ne ext.	3-26-46	2875	2850- 2875	Bartlesville sd; Penn	Sw & F 125	39	9
Ellsworth	Edwards	Cities Service Oil Co's Rathbun 1, sw se se 16-17s-8w, ½ mi nw ext.	12- 5-46	3223	3186- 3223	Arbuckle li; Ord	P 79	....	9
Ellsworth	Edwards	Nelson Drlg. Co's Williams 1, nw sw nw 22-17s-8w, ½ mi n ext.	2- 2-46	3259	3242- 3259	Arbuckle li; Cam	P 21; 1 wtr	....	
Ellsworth	Vacek	Bridgeport Oil Co's Zvolanek 1-B, sw sw se 29-15s-10w, ½ mi n of Vacek pl.	1-27-46	3315	3308- 3315	Arbuckle li; Cam	P 246 110 wtr	39	3
McPherson	Crowther	The Elbar Corp's Clark 1, ne ne ne 34-17s-1w, ½ mi s ext.	2-24-46	2745	2726- 2745	Mississippi chat; Miss	P 120; 40 wtr	....	10
Ness	Arnold	Sohio's Holy Cross 1, csw sw 23-16s-25w, 1 mi e ext.	3-23-46	4549	4531- 4549	Mississippi li; Miss	P 1508	39	2
Norton	Ray	Cities Service's Finnegan 1, sw se se 25-5s-21w, ¾ mi w ext.	4- 4-46	3683	3678- 3683	Reagan sd; Cam	P 228	....	11
Rice	Edwards	Phil-Han Oil Co's Kalino 1, ne ne sw 3-18s-8w, ½ mi s ext.	12- 7-46	3288	3261- 3288	Arbuckle li; Ord	P 462	....	1
Russell	Gurney, W.	Bennett & Roberts' Boxberger 1, ce/2 se ne 16-14s-14w, ½ mi n ext.	7-23-46	3061	3026- 3029	Lansing li; Penn	P 75; 16 wtr	....	3
Russell	Mahoney	Royer & Farris' Mahoney 1, se se se 8-14s-12w, ¾ mi nw of Mahoney pl.	1-22-46	2976	2935- 2976	Lansing li; Penn	P 385	38	2
Saline	Salina	Currier & Keys Drlg. Co's Crawford 1, se nw nw 18-14s-2w, ½ mi w ext.	2-19-46	3267	3260- 3267	Viola li; Ord	P 50	....	3
Stafford	Heyen	H. A. Hershfield's Hullman 2, nw nw sw 13-22s-12w, ½ mi n ext.	7-22-46	3675	3669- 3675	Arbuckle li; Ord	P 18	....	1
Woodson	Big Sandy	Ruth Lane et al's Steinforth 1, sw se ne 13-26s-14e, 1 mi ne ext.	9- 1-46	1244	1233- 1244	Bartlestivlle sd; Penn	F 40	....	1
		KANSAS—New Gas Fields							
Barber	Donald	Continental's Skinner 1 se ne se 33-31s-16w, abt 4 mi w of of Skinner pl.	3-23-46	5167	4697- 4720	Mississippi li; Miss	F 1.86 mln	....	1
Marion	Lehigh	Anderson-Prichard Oil Co's Warkentine 1, se se nw 27-19s-1e, on w edge of the town of Lehigh: 3½ mi e of McPherson Co. line.	6-20-46	2828	2808- 2828	Mississippi li; Miss	F 12 mln	....	1
Pratt	Stoops	Bridgeport Oil Co's Stoops 1, se se sw 7-29s-12w, 6 mi sw of Chitwood pl.	3- 6-46	4731	4446- 4452	Viola li; Ord	F 3.70 mln	....	1
Sedgwick	Bartholomew	Kingwick O & G Co's Bartholomew 1, se se sw 30-27s-4w, 2½ mi ne of Cheney,	8- 1-46	3737	3692- 3737	Mississippi li; Miss	F 5 mln	....	1
Wyandotte	Forrest City Basin Ar.	Erie Oil Co's Fee 1, se nw nw¼ 31-11s-25e	9-18-46	529	526- 529	Permian sd; Perm	F .02 mln	....	1

[1] **"Completion horizon" indicates depth interval from which production came in discovery well.** [2] Character of producing formations abbreviated thus: ch, chalk; dolo, dolomite; li, limestone; sd, sandstone; sh, shale; ser, serpentine; cgl, conglomerate. Ages of formations abbreviated thus: Pleis, Pleistocene; Plio, Pliocene; Mio, Miocene; Olig, Oligocene; Eoc, Eocene; U. Cre, Upper Cretaceous; L. Cre, Lower Cretaceous; Jur, Jurassic; Tri, Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Miss, Lower Mississippian; Devo, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian. [3] Barrels of oil per day (24 hr. rate) flowing (F), pumping (P), swabbing (Sw), or bailing (B); or million cubic feet of gas daily open flow capacity; size of choke given in inches. [4] This final column shows number of producing wells at end of 1946 in the new field, new pay zone, or extension area opened by the productive exploratory well listed.

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SALIENT DATA ON PRODUCTIVE EXPLORATORY WELLS COMPLETED IN U. S. IN 1946

County	Field	COMPANY, WELL AND LOCATION	Date Completed	Total Depth (Feet)	[1]Completion Horizon (Feet)	[2]Name, Character and Age of Producing Formation	[3]Initial Production: Method and Choke	Gravity of Oil	[4]Prod. Wells Year End
		KANSAS—Gas Field Extensions							
Barber	Deerhead	Champlin Ref. Co's Larkin 1, cwl sw ne 23-32s-15w, in the Deerhead area, ½ mi nw ext.	7- 3-46	4989	4958- 4985	Maquoketa li; Ord	F 40 mln	....	1
Finney	Hugoton	Stanolind O & G Co's Kicks 1, center of 3-25s-32w, 10 mi e ext.	9-18-46	2667	2542- 2667	Paddock sd; Perm	F .21 mln	....	
Finney	Hugoton	Stanolind O & G Co's Neiderklein 1, sw sw sw ne ¼ 35-23s-33w, 4 mi e ext.	9-18-46	2717	2554- 2570	Herrington sd; Perm	F .27 mln	....	
Finney	Hugoton	Wood River Oil Co's Stecheljohn 1, nw nw se 6-26s-32w, 6 mi ne of Hugoton gas fld.	1-25-46	2668	2607- 2639	Krider sd; Perm	F 8 mln	....	
Hamilton	Hugoton	Stanolind O & G Co's Zook Gas Unit 1, center of 12-26s-39w, 7 mi w ext.	9-18-46	2681	2646- 2681	Ft. Riley sd; Perm	F 3.5 mln	....	
Kearny	Hugoton	Glenn Smith et al's Smalley 1, nw sw ne 3-25s-38w	3-25-46	4640	2385- 2396	Krider sd; Perm	F 6.03 mln	....	
Kearny	Hugoton	Stanolind O & G Co's Glaser 1, c sec 13-26s-38w, 7 mi w of Hugoton gas reserve.	8-27-46	2640	2432- 2640	Big Lime li; Perm	F 2.4 mln	....	
Morton	Hugoton	Stanolind O & G Co's Sutton 1, sw sw sw 16-32s-40w, 2 mi w of Hugoton gas fld.	8-20-46	2470	2315- 2384	Ft. Riley-Herrington sd; Perm	F 1.2 mln	....	
Stanton	Hugoton	Stanolind O & G Co's Baughman 1 "B", center of sect 9-30s-39w, 5 mi w ext.	10- 2-46	2533	2320- 2362	Herrington sd; Perm	2.7 mln	....	277
Stanton	Hugoton	Stanolind O & G Co's First Nat'l Bank 1, center of 28-29s-39w, 5 mi w ext.	9-18-46	2520	2454- 2520	Ft. Riley sd; Perm	F 1.5 mln	....	
Stanton	Hugoton	Stanolind O & G Co's Glenn 1, center of sect 15-28s-39w, 7 mi w ext.	12- 1-46	2500	2280- 2484	Permian sd; Perm	F 6.4 mln	....	
Stanton	Hugoton	Stanolind O & G Co's Marble 1, center of sect 11-30s-39w, 3 mi w ext.	10- 2-46	2590	2403- 2590	Permian sds; Perm	23.7 mln	....	
Stanton	Hugoton	Stanolind O & G Co's Myler 1, center of 29-29s-39w, 5 mi w ext.	9-18-46	2501	2422- 2450	Winfield sd; Perm	F 1.2 mln	....	
Stanton	Hugoton	Stanolind O & G Co's Peppercorn 1, c sec 4-30s-40w, 9 mi n and w of Hugoton gas reserve.	8-27-46	2350	2336- 2350	Ft. Riley-Herrington sd; Perm	F 1.6 mln	....	
Stanton	Hugoton	Stanolind O & G Co's Reece 1, sw sw sw ne¼ 36-30s-40w, 5 mi w ext.	9- 1-46	2575	2504- 2575	Ft. Riley sd; Perm	F .21 mln	....	
		KENTUCKY—New Oil Fields							
Butler	Rochester	Frank Bernler's Barbee 1, 17-l-32	8- -46	401	382- 398	Pennsylvania sd; Penn	P 10	....	..
Daviess	Griffiths	J. C. Ellis' Shipp Heirs 2, 9-P-28	9-25-46	1021	1019- 1021	Palestine sd; Miss	P 24	....	2
Daviess	Stanley	Fox and Fox's Grant 1, 15-P-28	10- -46	1240	1225- 1240	Tar Springs sd; Miss	P 80	....	2
Henderson	Anthoston	Ryan Oil Co's Crofton 1, 9-O-24	1- -46	2046	2025- 2046	Jackson sd; Miss	P 30	....	..
Henderson	Tunnel Hill	Carter Oil Co's Adams 1, 4-N-23	10- -46	2246	2226- 2246	Cypress sd; Penn....	P 100	....	..
McLane	Guffie	Miller and Schiarello's Wiggins 1, 20-N-27	11- -46	1645	1595- 1645	Tar Springs sd; Miss	P 85	....	1
Union	Robinsonville	Joe Enberg's Blake 1, 11-P-20	1- -46	2579	2576- 2579	Cypress sd; U Miss	P 96	....	3
		KENTUCKY—New Oil Pays							
Daviess	Panther	Miller and Schiarelle's Lochman 3, 12-N-27	4- -46	1500	1466- 1477	Tar Springs sd; U Miss	P 40	....	..
Henderson	Corydon, E	Fleming and Swann's Green 1, 10-O-22	1- -46	2625	2620- 2625	McClosky li; Miss	P 120	....	..
Henderson	Wilson	Basin Drlg. Co's Abbott 1, 10-T-22, ½ mi n of prod	8-30-46	1715	1705- 1715	Waltersburg sd; U Miss	P 182	....	6
Union	Uniontown	Harry Ames' Girten 1, 16-P-20	1- -46	2544	2528- 2544	Aux Vases sd; Miss	P 10	....	..
		KENTUCKY—Oil Field Extensions							
Clinton	Highway	L. L. Morris' Clay Witham 1, ½ mi n ext	5- -46	1160	1140- 1155	Trenton li; Ord	F 2500	....	..
Daviess	Birk City	J. Ashby et al's J. H. Gregory 1, 20-P-27, 1 mi e ext	9-22-46	1533	1515- 1533	Jackson sd; Miss	P 8	....	..
Daviess	Friendship Chapel	Sylvester Yonkers' Mayfield 1, 5-n-32, 1 mi ext	6- -46	637	619- 637	Tar Springs sd; Miss	P 35	....	..
Henderson	Robards	Carter Oil Co's Powell 1, 20-O-23, 1 mi n ext	8- -46	2705	2463- 2470	O'Hara li; L Miss	P 286	....	..
Henderson	Smith-Mills	Sinclair Oil Co's Humphrey 1, 5-P-21, ½ mi s ext	5- -46	2565	2550- 2565	McClosky li; Miss	F 1050	....	..
McLane	Cleopatra	Sohio Pet. Co's Pinkston 1, 7-N-27	11- -46	1750	1735- 1750	Jackson sd; Miss	P 66	....	..
		KENTUCKY—New Gas Fields							
Daviess	Owensboro	Watkins Drlg. Co's J. E. Massey 1, nw nw ne 25-p-29 at w limits of Owensboro.	4- -46	1200	1158- 1168	Waltersburg sd; U Miss	F 5.3 mln	....	..
Henderson	Dixie	Kentucky Nat. Gas Corp's Arnett 1, 19-O-22	1- -46	1050	1030- 1050	Pennsylvania sd	F 1.5 mln	....	..
		NORTH LOUISIANA—New Oil Fields							
Bossier	Plain Dealing	Barnsdall et al's Carter-Burton 1, c nw nw 26-23n-13w, 4 mi n Plain Dealing.	10- 1-46	12386	3228-	Tokio sd; U Cre	P 55	41	3
Catahoula		Lyons & Prentiss-Penrod Drlg Co's P. L. Mitchell 1, c nw nw 36-8n-7e, 4 mi s Riverfield.	12-11-46	9471	9320- 9345	"Pilot" of Tuscaloosa sd; U Cre	F 28; 10 wtr; ⅜"	30.1	1
Franklin	Big Creek, S	Gus K. Primos-C. W. Sharp's Butler 1, c sw nw 29-16n-8e	1- 9-46	3787	3500- 3540	Paluxy sd; L Cre	P 65	37.9	4
		NORTH LOUISIANA—Oil Field Extensions							
Claiborne	Lisbon	Hassie Hunt, Tr's Fuller 1, 1391 fr s&wl 33-22n-4w, 1 mi n prod.	11-28-46	7914	5160-	Travis Peak sd; L Cre	F 462; ¼"	35	1
Franklin	Big Creek	R. J. Caraway-F. L. Bryant's Mrs. M. L. Ruple 1, 9-16n-8e	4-13-46	3510	3024- 3036	Tuscaloosa sd; U Cre	F 41.5 mln	....	1
Madison	Delhi	Murphy-Sun's Haney McAllister 1, 651 fr sl 659.8 fr wl 17-17n-10e, ½ mi e ext.	9-19-46	3361	3350- 3355	Paluxy sd; L Cre	F 243; 1/4"	41.2	14
Richland	Big Creek	R. T. Sellers' L. P. Ford 1, c ne nw nw 12-16n-7e, 1½ mi w ext.	4-16-46	3203	2860- 2869	Tuscaloosa sd; U Cre	F 290; ¼"	39.9	14
Richland	Big Creek	R. T. Sellers' Dr. Thomas Burke 1, se sw 4-16n-7e	6-10-46	3318	2535-	Tuscaloosa sd; U Cre	30 mln	....	1
Richland	Dehlco	Kingwood Oil Co's Dr. T. M. Sayre 1, c se se sw 34-17n-7e, 4 mi s, 1 mi e Rayville.	8- 6-46	3430	2598- 2601	Tuscaloosa sd; U Cre	F 1.2 mln; ¼"	....	1
		NORTH LOUISIANA—New Distillate Fields							
Franklin	Killen's Ferry	Atlas O & R Co's Ayer Timber Co 1, sw nw 26-14n-9e, 11 mi e Winnsboro.	11-18-46	7027	6572- 6586	Tuscaloosa sd; U Cre	F 15; 4 mln	....	1
Lincoln	Choudrant	Calif. Co's Ida Rogers Richards 1, 11-18n-2w	4-20-46	9343	9096- 9120	Bodcaw sd; Jur	F 210; ¼"	53.6	1
		NORTH LOUISIANA—New Distillate Pays							
Caddo	Longwood	J. R. Querbes' E. T. Currie 1, c sw sw 20-19n-16w	1-23-46	6200	5525-5550	Pettitt li; L Cre	F Unest; 24.5 mln	52	1
Claiborne	Haynesville	Ohio Oil Co's Bond-Beene Unit 1-H, 22-23n-8w	4-18-46	10773	9990-10130	Smackover li; Jur	F 122; 1 mln; ½"	52	2
		NORTH LOUISIANA—Distillate Field Extension							
Lincoln	Hico-Knowles	R. W. Williams' Cooper 1, fr sec sect 25 to 2640 n 1310.5 e to e to lcn ln 25-20n-4w, 1 mi nw ext.	11- 8-46	8432	8280-	Bodcaw sd; Jur	F 113; 1.9 mln; ¼"	54	1
		NORTH LOUISIANA—New Gas Pay							
Tensas	Lake St. John	Calif. Co's J. W. Brown 3, sw 46-9n-10e	4-30-46	10287	10222-10250	Brown sd; L Cre	F 4.5 mln; ¼"	....	1
		NORTH LOUISIANA—Gas Field Extension							
Bossier	Bellevue	Burford & Barnes' Lodwick Lbr. Co. 1, 16-19n-11w, 1 mi w ext.	3- 4-46	2823	1955- 1965	Ozan sd; U Cre	F 0.73 mln	....	1

[1] "Completion horizon" indicates depth interval from which production came in discovery well. [2] Character of producing formations abbreviated thus: ch, chalk; dolo, dolomite; li, limestone; sd, sandstone; sh, shale; ser, serpentine; cgl, conglomerate. Ages of formations abbreviated thus: Plels, Pleistocene; Plio, Pliocene; Mio, Miocene; Olig, Oligocene; Eoc, Eocene; U. Cre, Upper Cretaceous; L. Cre, Lower Cretaceous; Jur, Jurassic; Tri, Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Miss, Lower Mississippian; Devo, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian. [3] Barrels of oil per day (24 hr. rate) flowing (F), pumping (P), swabbing (Sw), or bailing (B); or million cubic feet of gas daily open flow capacity; size of choke given in inches. [4] This final column shows number of producing wells at end of 1946 in the new field, new pay zone, or extension area opened by the productive exploratory well listed.

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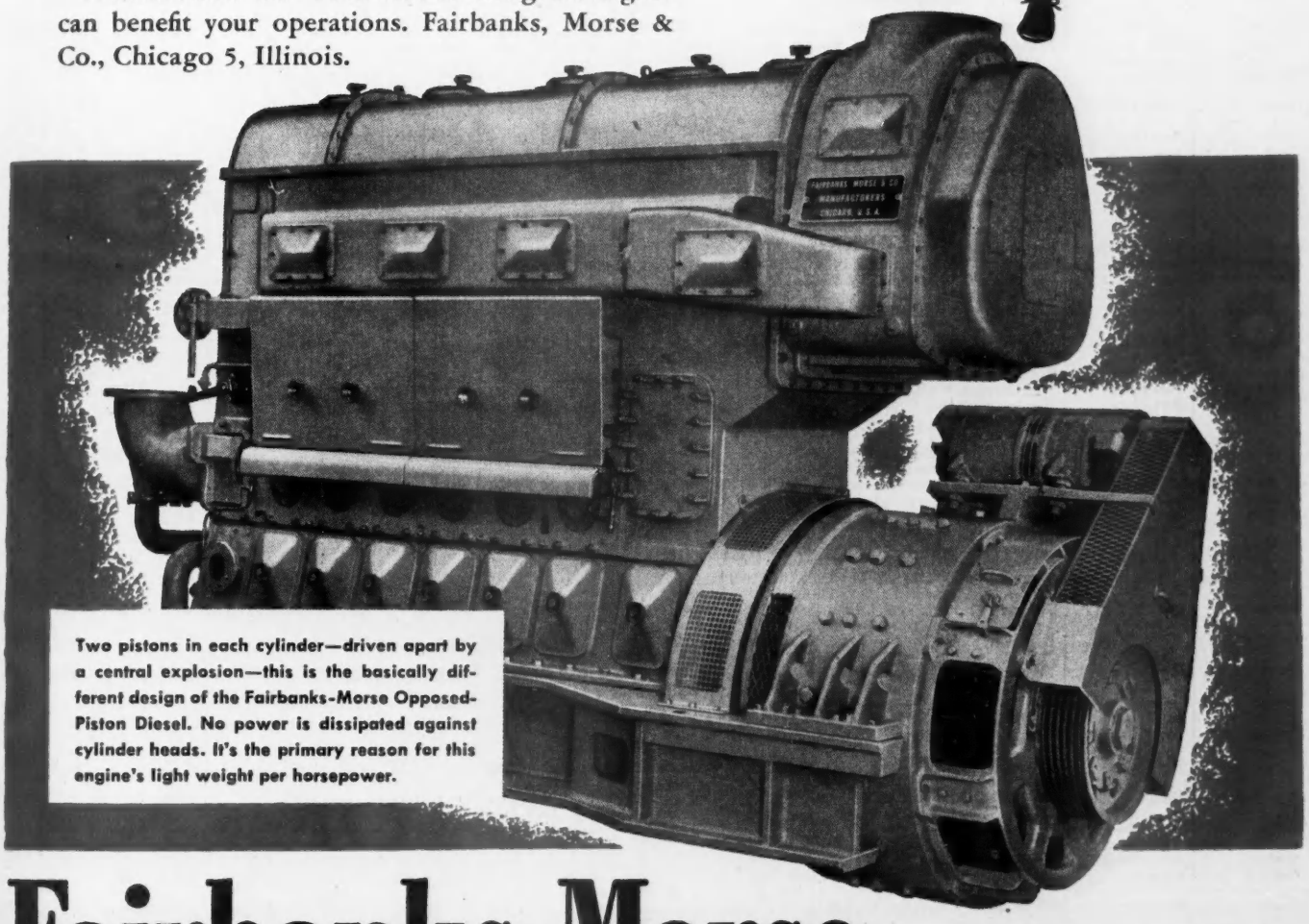

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SALIENT DATA ON PRODUCTIVE EXPLORATORY WELLS COMPLETED IN U. S. IN 1946

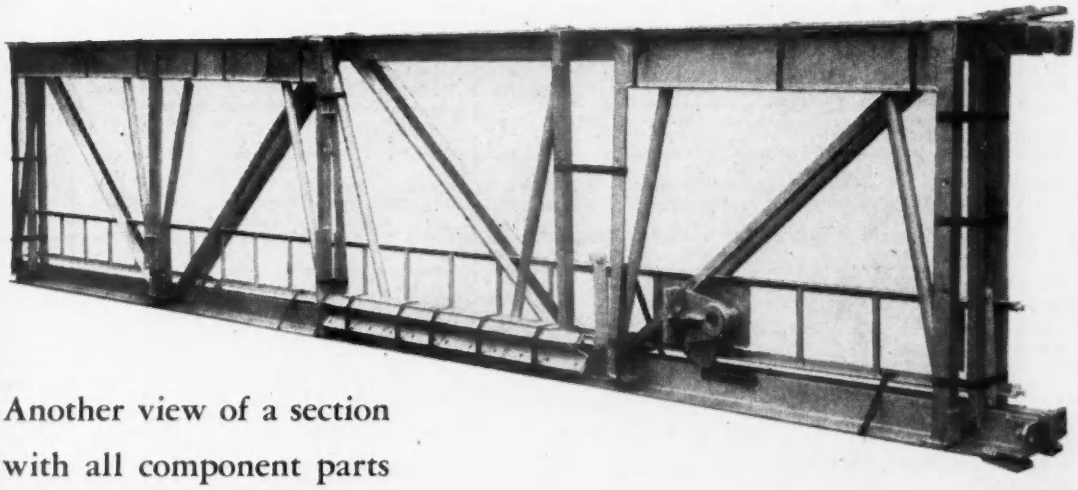
County	Field	COMPANY, WELL AND LOCATION	Date Completed	Total Depth (Feet)	[1]Completion Horizon (Feet)	[2]Name, Character and Age of Producing Formation	[3]Initial Production: Method and Choke	Gravity of Oil	[4]Prod Wells Year End
		SOUTH LOUISIANA—New Oil Fields							
Allen	Oberlin	Humble's Mrs. J. A. Bel Estate 1-B, c nw ne 33-5s-4w	2-11-46	13150	12650-12669	Wilcox sd; Eoc	F 74; 2.7 mln	47.5	1
Beauregard	Bilbo	Magnolia's Powell Lbr. Co 1, 1980 s 510 e of nwc 17-6s-11w, 2 mi nw Oretta, N. discovery.	6-21-46	8800	8412-	Cockfield sd; Eoc	F 85; 1/64"	43.9	2
Beauregard	Longville (Seale)	Barnsdall's Long Bell Lbr Co 1, c nw sw ne 1-6s-10w, 4 mi n Gordon fld.	12-11-46	8430	8228- 8253	Cockfield sd; Eoc	F 293; 3/64"	49.3	1
Beauregard	Oretta, N.	Magnolia's M. J. Witzki 1, 660 nwc 22-6s-11w, 2 mi n Oretta fld.	1-24-46	8969	8422- 8440	Cockfield sd; Eoc	F 90; 1/64"	45.1	1
Beauregard	Singer	Magnolia's Lutcher-Moore Lbr Co 2-C, 1980 n 660 w sec 22-5s-11w, 4 mi w Pinegrove fld.	1-25-46	11625	7620- 7683	Cockfield sd; Eoc	F 130; 1/64"	46.1	3
Calcasieu	Choupique	Union Sulphur Co's Eugene Ellender et al 1, 1631.4 w 313.1 n sec 17-11s-10w, s flk of Choupique Prospect, 5 mi n Hackberry, W. prod.	9-19-46	10037	8825- 8831		F 93; 7/32"	40.7	1
Evangeline	Mamou	Magnolia's J. B. Morein 1, c nw sw 5-5s-1e, 6 mi s 3 mi e Pine Prairie fld.	12-29-45	11653	11510-11553	Wilcox sd; Eoc	F 208; 1/8"	46.3	14
Jefferson	Bayou la Fleur	Calif. Co's E. P. Brady et al 1, 66-16s-24e	3-12-46	10679	9363- 9370	Miocene sd; Mio	F 300; 1/64"	38.7	7
La Fourche	Little Temple	Humble's Louisiana Delta Farms Co 1, 19-17s-23e	4-16-46	12007	10585-10635	Miocene sd; Mio	F 70; 75% wtr; 1/4"	30.8	1
Plaquemines	Alliance	Calif. Co's E. P. Brady Unit 4, 19-16s-24e, 3 mi se Bayou la Fleur disc. well.	10-14-46	14187	9072- 9082	Miocene sd; Mio	F 60; 3.7 mln; 1/4"	49.7	2
St. Charles	Hahnville Prospect	Union of Calif's Milliken & Farwell 1, start e cor sect 74-12s-19e go e 4790.36 th n 2875.85 to lcn in 26-12s-20e.	2-15-46	9981	8770- 8786	Miocene sd; Mio	F 25; 0.5% wtr; 1/4"	39.3	1
		SOUTH LOUISIANA—New Oil Pays							
Acadia	Egan	Sun-Sohio's Hayes A-1, 38-9s-1w	2- 3-46	10649	9897- 9908	Frio sd; Olig	F 175; 1/64"	47.4	1
Acadia	Ritchie, N.	A. J. Bankhead et al's Chas. Dischler 1, 2440 n 0° 13 min w th 2758.5 w fr sec 17-7s-1w, 3500 ft w ext.	10-14-46	9104	9051- 9058	Sd; Olig	F 239; 1/8"	32	1
Ascension	Sorrento	Pan American Prod Co's United Lds, Co. 21, 2550 n 1360 w of sec 15-10s-4e.	12-17-46	3619	3385- 3401	Sd; Olig	F 59; 11/64"	27.8	1
Calcasieu	Iowa	Shell's F. Heyd 35, ne 1/4 13-9s-7w	4- 3-46	5262	5170- 5195	Miocene sd; Mio	F 163; 7 mln	34.5	1
Calcasieu	Iowa	Shell's Heyd 39, 3300 w 660 s nec 13-9s-7w	9- 2-46	5853	5080- 5088	Sd; Miocene	F 259; 3/32"	34.1	1
Cameron	Black Bayou	Shell's Watkins 67, 990 s 120 w of nec 12-12s-13w	12-23-46	8601	8220- 8235	Sd; Olig	F 292; 1/64"	37	1
Cameron	Cameron Meadow	Magnolia-Humble's Cameron Meadow 43, 28-14s-13w, 3/4 mi s of prod.	4- 9-46	7638	7545- 7595	Miocene sd; Mio	F 40; .6 mln; mln; 1/8"	39.5	1
Evangeline	Mamou	Magnolia's Hilde Deshotel 1, 660 s&e of nwc nw1/4 ne1/4 7-5s-1e, 1/2 mi nw disc well.	8- 7-46	12037	11768-11772	Wilcox sd; Eoc	F 259; 1/8"	47.6	4
Iberia	Avery Island	Humble's Petit Anse Co. 10-B, 23-13s-5e	4-13-46	9866	8481- 9500	Miocene sd; Mio	F 292; 1/64"	33.6	1
Iberia	New Iberia	Humble's Mrs. Cecile W. Germany et al 2, 2-12s-7e	6-18-46	10196	9905- 9916	Thin sd; Mio	F 297; 1/64"	33.6	1
Iberia	New Iberia	Humble's Mayo Romero 2, 49-12s-7e	3- 5-46	9844	9660- 9690	Miocene sd; Mio	F 65; 1/64"	34	1
Iberia	Weeks Island	Shell's Smith-State Unit 1, Lse 500-2, 13-14s-6e	4- 4-46	14301	13763-13780	Miocene sd; Mio	F 553; 1/32"	33	1
Iberville	Bayou Blue	Union Sulphur Co's Schwing Lbr & Shgl Co 6, (OWWO) 500 n 968 e of c 67-9s-11e.	9- 7-46	6939	6902- 6912	Sd; Miocene	F 162; 1/64"	41.8	1
Iberville	St. Gabriel	Gravis & Mitchell's Matalbany 2-J, sec 12-9s-1e	12-26-46	12331	10808-10833	Marginulina sd; Olig	F 209; 1/64"	39	1
Iberville	White Castle	Shell's Wilbert 23, w fr nec 8-11s-12e	6-20-46	7563	7310-	Sd; Miocene	F 195; 1/8"	31.7	1
Jefferson	Lafitte	Texas Co's Geo. H. Kerner 6, 2438.3 n 1653.9 e swc 22-17s-24e	10-17-46	10759	10391-10426	Sd; Miocene	F 243; 1/8"	36.5	1
Plaquemines	Bayou la Fleur	Calif. Co's E. P. Brady et al 2, 34-16s-24e, ne offset to disc well.	5-13-46	10501	10445-10495	Miocene sd; Mio	F 260; 1/64"	36.9	4
Plaquemines	Venice	Tide Water's Buras Levee Distr 29, 330 n&w of sec 21-21s-30e.	4-24-46	13020	13000-13020	Miocene sd; Mio	F 326; 1/64"	38.8	1
Plaquemines	Venice	Tide Water's Buras Levee Dist 32, 759 s 235 w of nec 28-21s-30e	8-15-46	12192	11775-11805	U Miocene	F 260; 1/64"	35.3	1
Rapides	Big Island	Union Prod. Co. et al's Belgard 1, cne nw 14-4n-3e	7-23-46	12010	9684- 9722	Tuscaloosa sd; U Cre	F 361; 1/64"	46	1
St. James	La Pice	Shell's Mrs. Henry Schexnayder 4, w fr swc 38-12s-15e	6-23-46	9962	9715-	Sd; Miocene	F 176; 1/8"	33.1	1
St. Landry	Port Barre	Pan American Prod. Co's H. L. Garland 16, 4-6s-5e	2-21-46	10375	8980- 9055	Miocene sd; Mio	F 500; 1/4"	35.4	1
St. Landry	Port Barre	Pan American Prod. Co's H. L. Garland 17, 4-6s-5e	5- 8-46	9299	9169- 9191	Miocene sd; Mio	F 381; 1/32"	37.4	1
St. Landry	Port Barre	Pan American Prod. Co's H. L. Garland 18, 5500 n 67° 50 min w, at ra 22° 10 min e 1940 fr sec, 4-6s-5e.	8-26-46	9250	8270- 8286		F 274; 1/32"	35	1
St. Martin	Section 28	Gulf's Ruth Fleming et al 3-A, 1628.7 s alg el sect 28 fr nec, th 401.2 w at ra to se line in 28-9s-7e.	10-19-46	13123	10691-10742	Sd; Olig	F 491; 1/16"	33.1	1
St. Martin	*St. Martinville*	Continental's Continental Fee 3-A, 57-11s-6e, 300 nw Fee A-1	12- 8-46	8056	4883- 4902	Miocene sd; Mio	F 112; 1/64"	30	1
St. Mary	Belle Isle	Sun's Belle Isle Corp. 9-A, 2-18s-10e	3- 6-46	10405	8109- 8135	Miocene sd; Mio	F 52; 1/8	34.5	1
St. Mary	Charenton	Lynn Oil Co's Hine Est. 2, swc lot 8, 31-13s-10e	4- 2-46	7004	6458- 6505	Miocene sd; Mio	F 150; 1/64"	38	5
St. Mary	Jeanerette	R. J. Caraway's Gustave Hebert 1, 37-13s-9e	1-29-46	8146	7410- 7440	Miocene sd; Mio	F 168; 15% wtr; 1/32"	36	1
Terrebonne	Dog Lake	Texas Co's State Lse 12-5 Dog Lake Unit 200, 2494 s 3059 w of nec sect 1 in unit 12, 1-22s-15e	7-21-46	10131	9598-	Miocene	F 200; 1/8"	37.3	1
Terrebonne	Lake Pelto	Texas Co's State-Lake Pelto Lse 188-50, 7464 e of swc sect 17 in 16-23s-18e.	10-28-46	12602	12393-12415	Sd; Miocine	F 82; 1.5 mln	47.4	1
Vermilion	White Lake	Union of Calif's Vermilion Parish School Board 2-A, (OWWO) 16-15s-1e.	3-27-46	10600	9906- 9935	Miocene sd; Mio	F 188; 1/8"	36.1	1
Vermilion	White Lake, W.	Union of Calif's State-White Lake Lse 540-2-A, (OWWO) 1320 w of disc well 1-A.	3-28-46	10750	7318- 7326	Miocene sd; Mio	F 195; 1/64"	41.1	2
		SOUTH LOUISIANA—New Distillate Fields							
Cameron	Johnson's Bayou	Continental's Cameron Parish Schl Board 1, 16-15s-14w	4-10-46	9302	7312- 7320	Miocene sd; Mio	F 5; 1.8 mln	50	1
Jefferson	Barataria Bay, E	Texas Co's State-Barataria Bay 1, 8780 n 6200 e swc T-20s-25e	12-27-46	14490	11393-11410	Miocene sd; Mio	F 95; 1.1 mln	55.8	1
St. Tammany	Big Point	Atlantic's State-Lke Pontchartrain Lse 318-1-A, 17,368 s 767 e of sec 11-9s-12e.	9-23-46	11052	7157- 7188		F 166; 6.3 mln; 5/16"	51	1
		SOUTH LOUISIANA—New Distillate Pays							
Acadia	Bayou Mallet	Union Sulphur Co's Willie Sattler 1, 50-7s-1e	7- 4-46	8902	8465- 8467	Vicksburg sd; Olig	32; 2.5 mln	58.2	1
Acadia	Branch	Union Sulphur Co's Bruner-Bonin 1, 60-8s-2e	3-19-46	11919	11808-11825	L Chickasahwaysd; Olig.	4.3 mln; 1/8	....	1
Acadia	Egan	Sun-Sohio's E, M. Regan 3, 31-9s-1w	6- 4-46	13500	11874-11880	Vicksburg sd; Olig	F 188; 5% w; 1/64"	45	1
Acadia	Tepetate	A. J. Bankhead et al's Doris Fruge 1, 330 n&e of swc 28-7s-2w	9- 6-46	9187	8724- 8730	Olig	F 75; 1/64"	52	1
Allen	Elton, N.	Lloyd H. Smith's Wm. Rees 1, 1652.7 s of nl 2339.2 w of el 23-6s-3w, e side of prod.	7-30-46	7615	6044- 6046	Frio sd; Olig	18; 6 wtr; 1.3 mln 1/8"	48	1
Beauregard	Oretta	Magnolia's Webster Est. 1, 1968 n 2° 30 min w, 660 w of sec 32-6s-11w.	8-26-46	8837	8575- 8591	Cockfield sd; Eoc	F 90; 1/8"	56.5	2
Cameron	Mud Lake	Magnolia's Lutcher 1-B, 800 ft n of disc well 1-A, 33-14s-11w	3-25-46	10825	9636- 9658	Gueydan sd; Olig	F 31; 3 mln; 1/16"	48.3	1

[1] "Completion horizon" indicates depth interval from which production came in discovery well. [2] Character of producing formations abbreviated thus: ch, chalk; dolo, dolomite; ll, limestone; sd, sandstone; sh, shale; ser, serpentine; cgl, conglomerate. Ages of formations abbreviated thus: Plels, Pleistocene; Plio, Pliocene; Mio, Miocene; Olig, Oligocene; Eoc, Eocene; U. Cre, Upper Cretaceous; L. Cre, Lower Cretaceous; Jur, Jurassic; Tri, Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Miss, Lower Mississippian; Devo, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian. [3] Barrels of oil per day (24 hr. rate) flowing (F), pumping (P), swabbing (Sw), or bailing (B); or million cubic feet of gas daily open flow capacity; size of choke given in inches. [4] This final column shows number of producing wells at end of 1946 in the new field, new pay zone, or extension area opened by the productive exploratory well listed.

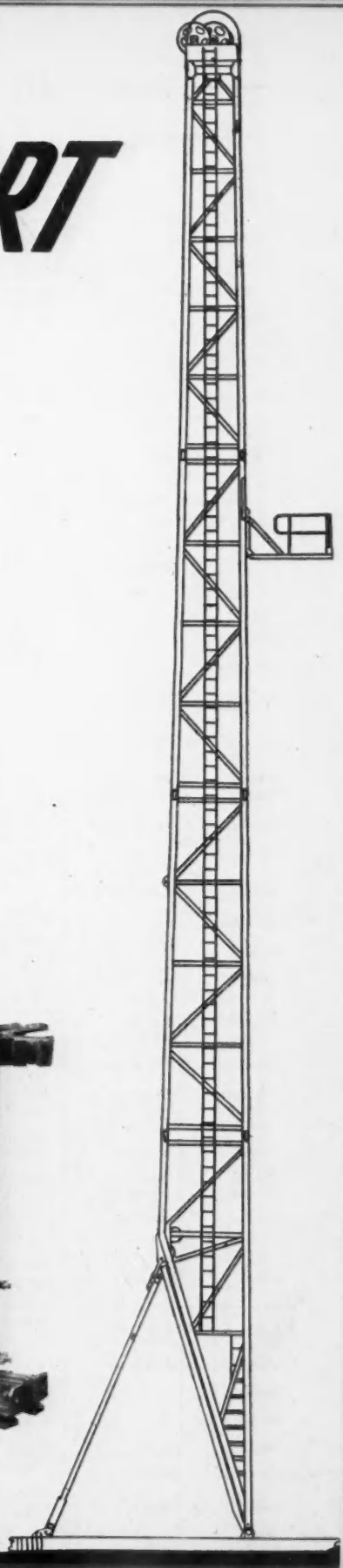
ADAPTED FOR EXPORT

The small welded shipping sections are assembled at the first field location. After this initial assembly the unit consists of the usual mast sections giving the highest degree of portability and requiring the least amount of assembly and dismantling time.

These units are complete in every detail, having conventional derrick capacities and are designed to accommodate any standard unitized draw-works, rotary and power.



Another view of a section with all component parts bundled for export.



LEE C. MOORE & COMPANY, INC.

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Oilfield Industrial Export, Inc. — 30 Rockefeller Plaza, New York 20, N. Y.

SALIENT DATA ON PRODUCTIVE EXPLORATORY WELLS COMPLETED IN U. S. IN 1946

County	Field	COMPANY, WELL AND LOCATION	Date Completed	Total Depth (Feet)	[1]Completion Horizon (Feet)	[2]Name, Character and Age of Producing Formation	[3]Initial Production; Method and Choke	Gravity of Oil	[4]Prod. Wells Year End
		SOUTH LOUISIANA—New Distillate Pays—(Continued)							
Iberville	Bayou des Glaise	Humble's E. B. Schwing et al 2-B, fr nec sect 86 go sly alg el 1400 th wly parallel to bl 2400 to lcn in 86-8s-8e.	12- 4-46	11890	11716-11726	Sd; Oligocene	F 48; 2 mln; 4/64"	55.3	1
Jefferson Davis	Elton, S	Stanolind's W. H. Tupper 3-A, (OWDD) fr sec sect 32 go 990 n&w to lcn in 32-7s-3w.	9- 6-46	10500	9362- 9382	Oligocene	F 33; 4/16"	50.1	1
Jefferson Davis	Jennings, S	Stanolind's S. Jennings Unit 8, 990 n 990 e of swc ne¼ 15-10s-3w	12-10-46	12034	10923-10936	Marginulina sd; Olig	F 45; .7 mln; 12/64"	45.5	1
Lafayette	Cankton, N	Shell's Breaux-Kilchrist 1, 65-8s-4e	1- 4-46	11101	10916-10966	Chickasahway sd; Olig	F 55; 4/64"	54.4	1
Terrebonne	Lake Barre	Texas Co's State-Lake Barre Lse 199-45, n 40° e 1000 fr well 44, n 51° 04 min e 6290 fr USCGS "Terrebonne" in Lke Barre, 19-21s-20e.	11- 3-46	14021	11900-11930	Sd; Miocene	F 23; .7 mln; 1/8"	50.3	1
Terrebonne	Lapeyrouse	British-American's A. M. Dupont Corp. 1, 345.8 s 578.4 w of nec 15-2?s-18e.	10-25-46	13879	12640-12685	Sd; Miocene	F 162; 3.4 mln; 4/64"	52	1
Terrebonne	Lirette	Humble's LaTerre Co. 5, fr nec sect 32, sly alg el 990 th wly parallel to nl 330 to lcn in 32-19s-19e.	11-27-46	10580	9606- 9624	Sd; Miocene	F 84; 6.3 mln ¼"	51.6	1
		SOUTH LOUISIANA—Distillate Field Extension							
Evangeline	Reddell	Continental's Pardee Co. 7, 1650 n&w fr sec sect 17, lcn in 17-4s-1w, 1 mi ne ext.	11-29-46	10040	9935-10001	Sparta sd; Eoc	F 216; 1.8 mln; 4/64"	52.1	..
		SOUTH LOUISIANA—New Gas Field							
St. Landry	Shuteston, S	Sun's Darby 1, 2029 s 414 e of nwc 6-8s-4e, 2 mi s of Shuteston prod.	7- 9-46	10130	9965- 9985	Oligocene	No gge; 7/64"	....	1
		SOUTH LOUISIANA—New Gas Pays							
St. Landry	Cankton, N	Humble's Vincent Boagni 1, fr nec sect 48 go 15.1 wly alg nl th 2165.6 sly at ra to 48-8s-4e.	9-16-46	11271	3064- 3065	U Miocene	F .7 mln; 4/64"	....	1
St. Landry	Cankton, N	Sun's L. A. Guidry 1, 13-8s-3e	3-23-46	10550	10193-10228	L Chickasahway sd; Olig.	No gge	....	1
St. Mary	Belle Isle	Texas Co's State 340-Atchafalya 4, T-18s-10e	2-15-46	10653	9790- 9800	Miocene sd; Mio	F 2 mln; 4/32"	....	1
		MICHIGAN—New Oil Fields							
Allegan	Brenner	W. Spencer Cook's Brenner 1, se nw ne 15-3n-13w, 1 mi e Monterey.	2- 5-46	1684	1680- 1684	Traverse li; Devo	F 226	42	14
Allegan	Hawkhead	J. E. Hood's Taylor 1, ne sw se 20-1n-16w, 4 mi nw Casco pl.	7-20-46	1103	1101- 1103	Traverse li; Devo	F 250	37.5	14
Allegan	Trowbridge, N	Spidel & Linsley's McCarn 1, nw nw ne 7-1n-13w, 2 mi n Trowbridge pl.	10-16-46	1337	1335- 1337	Traverse li; Devo	P 15	....	..
Bay	Mt. Forest	Sohio and National Associated's State 1, se ne ne 1-17n-3e, 6 mi s Adams fld.	3- 2-46	2970	2954- 2959	Dundee li; & dolo; Devo.	P 16	....	..
Kent	Gaines	Oil Producers, Inc's Brewer 1, ne se se 8-5n-11w, 8 mi s Grand Rapids.	6-29-46	1910	1859- 1865	Traverse li; Devo	P 3	....	..
Montcalm	Cato	Sohio Pet. Co., Union Drlg. Co., and Leslie Barber's Douglas 1, nw sw se 3-12n-8w, 3 mi sw Six Lakes gas fld.	1-22-46	3554	3545-3554	Monroe dolo; Devo	F & Sw 57	46	2
Montcalm	Day	McClure Drlg. Co's Wicks 1, sw ne nw 36-11n-6w, 4 mi w Crystal fld.	6-21-46	3345	3337- 3338	Dundee li; & dolo; Devo	P 55; 35 wtr	42	1
Oceana	Stony Lake	Carter Oil Co's Miller 1, ne sw sw 11-13n-18w, 18 mi nw Muskegon fld.	12- 2-46	1631	1629- 1631	Traverse li; Devo	F 192	44.9	1
Oscoda	Mio	Ohio Oil Co. and Sohio Pet. Co's Mio Unit 1, se nw sw 30-25n-3e, 6 mi ne Rose City fld.	5-16-46	5129	4170- 4255	Richfield li; & dolo Devo	F & Sw 26	....	1
Tuscola	Arbela	Fred Riddell's Clark 1, ne se nw 33-10n-7e, 6 mi se Birch Run pl.	2- 7-46	2554	2551- 2554	Dundee li; Devo	F 11; 6 mln	....	4
Tuscola	Elkland	Palmer & Gordon's Palm Book 1, se se sw 21-14n-11e, 19 mi e Akron pl.	9- 9-46	3735	2680- 2688	Dundee li; Devo	P 45; 3 wtr	31	1
Van Buren	Coffee Lake	W. D. Gannett's Chamerlain 1, ne nw sw 17-1s-15w, 3 mi sw Columbia pl.	6-26-46	1130	1128- 1130	Traverse li; Devo	F & P 69	40	5
Van Buren	Lacota	Ford Oil Co's Tolles 1, sw se ne 10-1s-16w, 2 mi nw Breedsville pl.	4-12-46	1112	1111 -1112	Traverse li; Devo	F & Sw 110	....	6
		MICHIGAN—Oil Field Extensions							
Allegan	Monterey	Tamblyn Development Co's Brown 1, ne se se 4-3n-13w, 1 mi ne ext.	1- 5-46	1674	1670- 1674	Traverse li; Devo	F & Sw 45	....	..
Isabella	Sherman	Chartiers Oil Co's Diehl 1, n½ nw sw 29-15n-6w, 1 mi nw ext.	4-11-46	3779	3289- 3295	Traverse li; Devo	F 68; 1.5 mln	46	1
Mecosta	Wheatland	Rex O & G Co's Skalitzky 1, nw nw se 8-14n-7w, 1 mi se of abnd discovery in area.	5-16-46	3702	3701- 3702	Dundee dolo; Devo	F 1600; 4/16"	43	1
Ogemaw	Rose City	United Drillers-Producer's Anderson 1, nw nw ne 11-23n-2e, 2 mi se ext.	6-25-46	5160	.....	Richfield li; Devo	P 4	....	1
		MICHIGAN—New Distillate Field							
Clare	Garfield	Pure Oil Co's Freer 1, n½ nw sw 18-17n-6w, 6 mi ne Fork fld.	5-27-46	5037	5038- 5064	Richfield sd; Devo	F 100; 26.8 mln	52	1
		MICHIGAN—New Gas Fields							
Isabella	Rolland	West Michigan Consumers Co's Lake 1, se nw ne 30-13n-6w, 3 mi e Six Lakes gas fld.	5-25-46	1336	1335- 1336	Michigan Stray sd; Miss	F 2.5 mln	....	3
Livingston	Howell	Panhandle Eastern Pipeline Co's McPherson 1, nw sw se 35-3n-4e, 30 mi se city of Lansing.	10-22-46	3907	3897- 3907	Salina dolo; Sil	7 mln	....	1
Mecosta	Green	Ashby Drlg. Co's Battle 1, ne sw se 18-16n-10w, 5 mi nw Big Rapids gas fld.	5- 5-46	1245	1240- 1245	Michigan Stray sd; Miss	1.6 mln	....	3
Mecosta	New Morton	Mich. Consolidated Gas Co's Stickler 1, c sw 15-14n-8w, 3 mi se Austin fld.	11-27-46	1282	1280- 1282	Michigan Stray sd & li; Miss	1.6 mln	....	1
Ottawa	Zeeland, N	Clawson Develpoment Co's Blauwkamp 1, cse se 2-5n-14w, 9 mi sw Grand Rapids.	9-19-46	977	967- 972	Berea sd; Miss	F .8 mln	....	2
		MICHIGAN—New Gas Pays							
Gratiot	Elba	A. E. William's Long 1, nw se se 15-9n-1w	2-13-46	700	650- 670	Michigan Stary sd; Miss	F 3.45 mln	....	3
Osceola	Cedar	Ashby Drlg. Co's Boettcher 1, cnw se 28-18n-9w	1- -46	1560	1554- 1560	Stray sd	F .7 mln	....	2
Roscommon	Roscommon	E. V. Hilliard's State E 1, ne nw sw 20-21n-3w	4-21-46	4133	1470- 1525	Stray sd; Miss	F 1.1 mln	....	8
		MICHIGAN—Gas Field Extension							
Ogemaw	Logan	Sun Oil Co's Adams-Walker 1, cnw 12-22n-3e	5- -46	1464	1424- 1430	Berea sd; Miss	F .5 mln	....	1
		MISSISSIPPI—New Oil Fields							
Adams	La Grange	Roeser & Pendleton-Sohio's Baker-Maier 1, nwc 34-6n-2w, 1 mi se of Natchez.	2-18-46	10673	10524-10548	Basal Tuscaloosa sd; U Cre	F 97; 400 wtr ¼"	39.2	7
Adams	Pine Ridge	Phillips Pet. Co's Mrs. Vic Artman 1, 36-8n-2w, 6 mi ne Natchez	12- 5-46	5684	4200- 5625	Wilcox sd; Eoc	F 114; 4/32"	40.9	1

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SALIENT DATA ON PRODUCTIVE EXPLORATORY WELLS COMPLETED IN U. S. IN 1946

County	Field	COMPANY, WELL AND LOCATION	Date Completed	Total Depth (Feet)	[1]Completion Horizon (Feet)	[2]Name, Character and Age of Producing Formation	[3]Initial Production: Method and Choke	Gravity of Oil	[4]Prod. Wells Year End
		MISSISSIPPI—Oil Field Extensions							
Adams	La Grange	Vaughey & Vaughey's R. Lee Parker 1, n&w sec 9-6n-2w, ½ mi w ext.	12-12-46	6246	6240- 6246	Wilcox sd; Eoc	F 130; ⅛"	43.6	1
Lamar	Baxterville	Gulf-Welch's John Q. Butler 1, swc se 32-2n-16w, 1½ mi ne ext.	10-31-46	9419	8900- 89542	Stringer sds; L Tuscaloosa sd; L Cre	F 116; 4/64"	13.6	1
Lincoln	Brookhaven	Roeser & Pendleton's Cora M. Ballard 1, sw sw 17-7n-7e, 1 mi sw ext.	9-23-46	10470	10390—10452	Massive sd; L Cre	F 720; ¼"	39.5	4
Lincoln	Mallalieu	California's F. W. McDaniel 1, 17-6n-8e, 2¼ mi sw ext.	8- 5-46	10540	10415-10433	L Tuscaloosa sd; L Cre	F 486; 4/64"	38	3
		MISSISSIPPI—New Distillate Pay							
Marion	Hub	Humble O & R Co's E. A. Ball 3, nwc 20-2n-14e, 8 mi s of Columbia.	6-17-46	10497	9384- 10497	Comanchean sd; L Cre	F 43; 1.5 mln; ⅛"	53	1
		MISSISSIPPI—New Gas Field							
Warren	Kings	Magnolia's Ruth Pidgeon 2, swc se se 27-17n-4e, 3 mi n of Vicksburg.	3-12-46	2546	2037- 2047	Gas Sand sd; U Cre	F 1.1 mln; ¼"	....	2
		MISSISSIPPI—New Gas Pays							
Adams	Cranfield	The California Co's Ella G. Lees 9, 45-7n-1w	7- 5-46	12718	11500-	Paluxy sd; L Cre	3 mln; 4/64"	....	1
Jefferson	Fayette	Humble's M. R. Smith C-1, 27-9n-1w	11- 5-46	11100	3538- 3543	Wilcox sd; Eoc	F 1.9 mln; ¼"	39.5	2
		MISSISSIPPI—Gas Field Extension							
Jefferson Davis	Gwinville	Gulf's Vinnie Walker 1, nwc ne sw 34-9n-19w, ½ mi sw ext.	2-22-46	9352	7682- 8100	Eutaw-Tuscaloosa sd; U Cre	F 31 cond; 4.1 mln; ¼"	50.2	1
		MONTANA—New Oil Fields							
Garfield	Cat Creek, E.	Wm. M. Hanlon et al's Government 1, ne ne sw 6-14n-31e	4- 8-46	1827	1814- 1827	Morrison & Ellis sd; Jur	P & Sw 110	52	10
Petroleum	Rattlesnake Butte	H. H. Swartz, et al's Government 1, nec sw se 22-13n-28e	3-15-46	3235	2780- 2810	2nd Cat Creek sd	P 60	29	1
Toole		Big West Oil Co's Proefrock 1, c nw nw 7-34n-4w, betw Cut Bank and Kevin-Sunburst flds.	9- 4-46	2364	2318- 2342	Kootenai sd; L Cre	P 15	37	1
		MONTANA—New Oil Pays							
Glacier	Cut Bank (Gas Area)	Union Oil Co's McGuinness Unit 7, sw ne nw 6-35n-5w	12- 3-46	3089	3084- 3089	Madison li; -Miss	Sw 100	41	1
Petroleum	Cat Creek	Ralph Chamberlin's Rhens 12-A, (OWDD) ne ne se 9-15n-29e	4-10-46	1753	1740- 1753	Ellis sd; Jur	F 50	50	3
		MONTANA—New Gas Pays							
Liberty	Utopia	The Texas Co's Nick Laas 2, nw ne sw 14-33n-4e	11- 1-46	4569	3559- 3775	Jefferson dolo; Devo	20 mln	....	1
Toole	Sweet Grass Hills	A. A. Oil Corp's Parsell 1X, nw nw ne 4-36n-3e	11- 2-46	2036	2007- 2036	Bow Island (Colorado) sd; Cre	10 mln	....	1
		SOUTHEAST NEW MEXICO—New Oil Fields							
Chaves	Bitter Lake	DeKalb Agricultural Asso.'s Nelle Lewis 1, c se sw 13-10s-25e	12-13-46	5650	1247- 1275	San Andres li; Perm	P 7; 9 wtr	25	1
Eddy	Forest	Forest E. Levers et al's Levers-Federal 1-B, c se ne 34-16s-29e, 1 mi e by s of pumper on same prod contour.	1- 1-46	3028	2632- 2670	Grayburg sdli; Perm	P 35; ½"	39	2
		SOUTHEAST NEW MEXICO—New Oil Pays							
Lea	Cass (Weir)	Continental Oil Co. et al's J. M. Skaggs 4-B-23, c sw se 23-20s-37e, se offset to 7700-ft prod.	5-20-46	7900	6760- 6830	Clear Fork (Yeso) li; Perm	F 111; 1"	37	1
Lea	Penrose-Skelly	Rowan Drlg Co's Elliott 2-B-15, c ne ne 15-22s-37e, offsetting 6500-ft Yeso prod; nearest Glorietta was 1½ mi e by n in Paddock fld.	2-22-46	5350	5117- 5219	Glorietta li; Perm	F 218; 42 wtr ¾"	38	..
		SOUTHEAST NEW MEXICO—Oil Field Extension							
Lea	Maljamar	H. W. Snowden O & G Co. (was Barney Cockburn's) Wyatt 1, (OWWO) c se se 33-17s-33e, reworked failure; 1½ mi se ext.	6- 1-46	7044	4600- 4830	San Andres li; Perm	P 30	39	1
		SOUTHEAST NEW MEXICO—Gas Field Extension							
Lea	Eunice, S.	Texas Pacific Coal & Oil Co's State 16-A, Acct. 1, c ne ne Sect 11-23s-36e, 1¾ mi se ext.	9- 4-46	3825	3160- 3550	San Andrew li; Perm	F 4.2 mln; 2"	....	1
		OHIO—New Oil Field							
Trumbull	Vernon	Hickman et al's J. B. Everett 1, Lot 6, Vernon Twp	2- -46	3336	3306- 3332	Oriskany sd; Devo	P 8	....	1
		OHIO—Oil Field Extension							
Morgan	Brush Creek	Industrial Gas. Corp's H. H. Bankes 1, nw ne 20-T11N R12W, Deerfield twp, 2 mi w ext.	12- 6-46	4033	4010- 4025	Clinton sd; Sil	Sw 25; .2 mln	....	..
Muskigum	Brush Creek	Industrial Gas Corp's E. F. Clapper 1, se se sec 14, 2 mi ne ext.	6- 3-46	4388	4380- 4388	Medina sd; Sil	Sw 18	....	6
		OHIO—Gas Field Extensions							
Ashland	Ashland	Frank Lyon's Harold Hastings 1, sec. 35, Jackson twp	1- -46	2981	2970- 2980	Clinton sd; Sil	F 3.24 mln	....	5
Ashland	Ashland	Ohio Fuel's O. S. Vance 1, Sec. 29, Hanover twp	2- -46	2786	2746- 2751 2772- 2779	Clinton sd; Sil	F 7 mln	....	3
Columbiana	Knox	Snee & Elberly's B. Humphrey 1, sec. 34, Knox twp	2- -46	5582	5366- 5469	Clinton sd; Sil	F 0.18 mln	....	1
Columbiana	Round Knob	Ohio Oil-Galey's G. L. Powell 1, ne sec. 22, Madison twp se of W (Power) Point.	2- -46	4474	4465- 4474	Oriskany sd; Devo	F 2.84 mln	....	5
Lorain	Ashland	Ohio Fuel's Phillip Bobel 1, Lot 36, Penfield twp	5- -46	2522	2512- 2521	Clinton sd; Sil	F 1.7 mln	....	3
Lorain	Ashland	Ohio Guel Gas Co's H. T. Breyley 1, Lot 158, Pittsfield twp.	5- -46	2247	2227- 2241	Clinton sd; Sil	F 3.7 mln	....	3
Lorain	Ashland	Ohio Fuel Co's E. R. McConnell 2, Lot 137, Pittsfield twp, ½ mi s ext.	4-10-46	2216	2205- 2216	Clinton sd; Sil	F 1.5 mln	....	3
Lorain	Ashland-Medina-Lorain	Harmon & McManaway's A. Shuster 1, ne se 2 Carlisle twp, 2 mi s of Elyria.	12- 4-46	2330	2301- 2306	Clinton sd; Sil	F .3 mln	....	1
Mahoning	Goshen	J. W. McIntosh's Geo. W. Dunn 1, sec. 1, Goshen twp	2- -46	3532	3522- 3532	Oriskany sd; Devo	F 0.15 mln	....	1
Medina	Ashland	William Dempsey's Ervin Wilkinson 1, Lot 2, Hinckley twp	1- -46	3256	3200- 3230	Clinton sd; Sil	F 0.20 mln	....	1
Meigs	Stewart	Mathews Oil Co's Del White 1, sec 14 Chester twp, e of hemlock Grove.	9-14-46	1637	1633- 1636	Berea sd; Miss	0.27 mln	....	3
Meigs	Stewart	J. D. Theis & G. D. Edwards' Coy C. Hawk 1, sw ne 17, Orange twp, 3½ mi e of Hemlock Grove pl, 2 mi w of Tuppers Plains.	12-10-46	1615	1611- 1615	Berea sd; Miss	0.2 mln	....	1
Morgan	Brush Creek	Ohio Fuel Gas Co's Geo. E. Carr 1, sect 27, Deerfield twp, 3 mi s ext.	4-20-46	4278	4241- 4258	Clinton sd; Sil	F 1.4 mln	....	2
Morgan	Brush Creek	Stephens Pet. Co's Ross Robinson 1, sec 3, N. Bloom twp, ½ mi ne ext.	3- -46	4418	4387- 4417	Clinton sd; Sil	F 4.0 mln	....	4
Muskingum	Brush Creek	Four Way O & G Co's Wm. D. Miller 1, ne nw 36, Blue Rock twp, 3 mi ext.	12-13-46	4692	4679- 4688	Clinton sd; Sil	F 4.3 mln	....	1
Muskingum	Brush Creek	Ohio Fuel Gas Co's Estella Buchanan 1, ne ne 15, Brush Creek twp, 4 mi se of Zanesville.	8-15-46	3738	3687- 3735	Clinton sd; Sil	F .4 mln	....	2
Muskingum	Lancaster	Pure Oil Co's H. C. Eppley 1, se sect 26, Newton twp	3- -46	3475	3417- 3444	Clinton sd; Sil	F 2.5 mln	....	4

[1] "Completion horizon" indicates depth interval from which production came in discovery well. [2] Character of producing formations abbreviated thus: ch, chalk; dolo, dolomite; li, limestone; sd, sandstone; sh, shale; ser, serpentine; cgl, conglomerate. Ages of formations abbreviated thus: Pleis, Pleistocene; Plio, Pliocene; Mio, Miocene; Olig, Oligocene; Eoc, Eocene; U. Cre, Upper Cretaceous; L. Cre, Lower Cretaceous; Jur, Jurassic; Tri, Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Miss, Lower Mississippian; Devo, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian. [3] Barrels of oil per day (24 hr. rate) flowing (F), pumping (P), swabbing (Sw), or bailing (B); or milllion cubic feet of gas daily open flow capacity; size of choke given in inches. [4] This final column shows number of producing wells at end of 1946 in the new field, new pay zone, or extension area opened by the productive exploratory well listed.

County	Field	COMPANY, WELL AND LOCATION	Date Completed	Total Depth (Feet)	[1]Completion Horizon (Feet)	[2]Name, Character and Age of Producing Formation	[3]Initial Production; Method and Choke	Gravity of Oil	[4]Prod. Wells Year End
		OHIO—Gas Field Extensions—(Continued)							
Perry	Brush Creek	B. G. Davis' Murray Penrod 1, nw nw 27, Bearfield twp, ½ mi s ext.	9- -46	3961	3956- 3961	Medina sd; Sil	F 1.1 mln	....	2
Perry	Brush Creek	B. G. Davis' Ray Penrod 1, sect 22, Bearfield twp, 1 mi sw ext.	5- -46	3896	3805- 3837 3890- 3896	Clinton sd; Sil Medina sd; Sil	F 0.43 mln		1
Stark	Sandyville	Belden's V. H. Weaver 1, sec 30, Canton twp	1- -46	4650	4613- 4642	Clinton sd; Sil	F 2.19 mln		11
Stark	Sandyville	East Ohio Fuel Co's N. E. Shearer 1, sec 3, Bethlehem twp, ½ mi w ext.	3- -46	4477	4452- 4476	White Clinton sd; Sil	F 1.12 mln		5
Stark	Sandyville	Obermiller et al's J. G. Laughlin 1, sect 34, Plain twp, 1 mi ext.	4- -46	4635	4565- 4633	Clinton sd; Sil	F 4 mln		28
Stark	Sandyville	Wm. Pfeiffer's I. F. Wagner 1, sec 32, Perry twp, ½ mi w ext.	3- -46	4275	4249- 4272	White Clinton sd; Sil	F 1.4 mln		5
Stark	Sandyville	Smith Pet's Ravenna Reality 1, sec 31, Plain twp, ½ mi w ext.	2- -46	4548	4530- 4548	White Clinton sd; Sil	F 2.49 mln		17
Wayne	Ashland	Ohio Fuel Gas Co's Cleveland Trust Co 1, nw sw 3, Congress twp, 1 mi e ext.	9- -46	2936	2910- 2936	Clinton sd; Sil	F 1.5 mln		1
		OKLAHOMA—New Oil Fields							
Canadian		Fox & Fox's Simpson 1, c se sw 9-14n-5w, 3½ mi n of Piedmont	2- 1-46	8385	7085- 7100	Bartlesville sd; Penn	F 100		1
Comanche		Creel & Lowe's Lowe 4, nw nw nw 7-1n-10w, 1½ mi s Lawton pl.	12- 1-46	451	400- 405	Pennsylvanian sd; Penn	P 3	36	1
Cotton	Cache Creek	R. B. Farris et al's Wook-kah-nah 1, sw nw sw 7-4s-11w, 5 mi sw of Temple town.	7- 1-46	1389	1316- 1328	Pennsylvanian sd; Penn	F 120	35.5	194
Cotton	Coon Creek, E.	L. H. Choate's Shelby 1, nw nw se 5-4s-10w, betw Temple and Cache Creek pls.	10-21-46	1359	1348- 1350	Pennsylvanian sd; Penn	F 65	37	1
Cotton	Essaquanahdale	Bridwell Oil Co's Houghton 1, se nw nw 23-3s-11w, abt 4 mi w of Temple.	5-27-46	1498	1490- 1498	Pontotoc sd; Perm	P 50	39	17
Cotton	Soldier Creek	S. D. Johnson et al's Simon 1, ne se nw 9-3s-11w, 2½ mi se of Walters.	10-21-46	1615	1595- 1605	Pennsylvanian sd; Penn	F 35	35	54
Cotton	Soldier Creek, N.	Martin Properties' Dyer 1, sw se 33-2s-11w, 1 mi n Soldier Creek fld.	11-14-46	1652	1650- 1652	Pennsylvania sd; Penn	P 25		1
Creek		Skelly Oil Co's Hobart 1, ne sw se 8-17n-10e, abt 2½ mi w of Kellyville.	2-25-46	2990	2974- 2990	Wilcox sd; Ord	P 58		1
Garfield	Spring Valley, S. E.	J. E. Crosbie, Inc's Seigle 1, ne se sw 32-23n-4w, abt 4 mi w of the old Garber area.	7-27-46	6063	6058- 6063	Second Wilcox sd; Ord	Sw 64		1
Garvin	Antioch, S.W.	Globe Oil & Ref. Co's Gibson 1, c se ne 30-3n-2w, 5 mi sw of Antioch pl.	2-21-46	7753	6533- 6539	Pennsylvania sd; Penn	F 400	42.8	28
Garvin	Katie	Carter Oil Co's Burford 1, nw nw nw 5-1n-1w, 1½ mi ne Katie town.	11-11-46	7905	6070- 6088	Hoxbar & Deese sds; Penn	F 463	44	1
Hughes	Adams, N.W.	Mid-Continent Pet. Corp's Rogers 1, ne se sw 26-9n-8e, 3½ mi e of N. Wewoka pl.	6-29-46	4556	3259- 3276	Gilcrease sd; Penn	Sw 90		1
Hughes	Greasy Creek	O. H. Grimes' Meadors 1, sw se se 23-8n-10e, 4 mi se of Yeager pl.	3-26-46	3435	3405- 3435	Cromwell sd; Penn	F 1200	42	7
Hughes	Grief Creek	B. C. Deardorff's Gentry 1, nw nw ne 14-7n-9e, 4 mi e of Holdenville.	9- 4-46	2996	2874- 2894	Booch sd; Penn	F 90	38.9	2
Hughes	Holdenville	W. N. Bartlett's Harjo 1, ne nw se 7-6n-9e, abt 1½ mi n of Holdenville.	3- 1-46	3698	2826- 2851	Booch sd; Penn	P 20		1
Hughes	Holdenville, E.	B. C. Deardorff's Miller 1, se se se 5-7n-9e, 1 mi e of Holdenville pl.	11- 4-46	2882	2858- 2882	Booch sd; Penn	P 60	38	2
Hughes	Jefferson, N.	Sherrod & Apperson's Barnard 1, se sw ne 23-8n-8e, 1 mi sw Holdenville town.	11-19-46	3296	3284- 3296	Wapanuka (Union Valley) li; Penn	P 60		1
Jackson	Altus, N.E.	The Texas Co's Hickman 1, sw nw nw 6-1n-19w, abt 2½ mi nw of E. Altus pl.	4-20-46	3032	1542- 1551	Granite Wash cgl; Perm	P 16	40	1
Kingfisher		J. A. King et al's Lankhard 1, ne ne se 34-17n-6w, abt 6 mi ne of Kingfisher.	5-30-46	7717	7552- 7575	Hunton li; Sil	F 100		1
Lincoln	Kendrick, E	Texola Drlg. Co., Inc's Strough 1, sw sw sw 11-15n-5e, 1 mi w of Skellyville area.	8-10-46	4178	3670- 3680	Prue sd; Penn	P 26		1
Lincoln	Parkland, E	Olson Drilling Co's Wilson 1, ne se sw 20-16n-5e, abt 3 mi n of Kendrick pl.	3- 2-46	3546	3502- 3540	Prue sd; Penn	F 253	39	5
Lincoln	Wilzetta, N	Sam A. King's Earlabough 1, sw se ne 34-13n-5e, 1 mi w of Wilzetta pl.	6-12-46	4317	4310- 4311	Misener sd; Miss	F 200; 3/32"	43	16
Lincoln		Hubble & Webb's Smith 1, se ne se 3-14n-6e, 1½ mi nw of Davenport pl.	8-26-46	4075	4042- 4055	Hunton li; Devo-Sil	P 6		1
Logan	Coon Creek	Sinclair-Prairie's Teuscher 1, se se sw 34-15n-1w, abt 3 mi n of Arcadia pl.	2-12-46	5941	5929- 5941	Wilcox sd; Ord	F 600	37	32
Love	Sivells Bend	The California Co's Wright 1, cne nw 13-8s-1w, 3 mi se of Leon	6- 6-46	6261	6255- 6261	Sd; Pennsylvanian	Sw 180		1
McClain	Blue Hill	Carter Oil Co's Thompson 1, c se ne 36-8n-4w, 1¾ mi n of Cole	5-29-46	10592	9970-10035	Hunton li; Sil	F 2500; 1"	41.5	1
McClain	Iron Chapel	Carter Oil Co's Mottinger 1, cnw nw 5-6n-3w, 4½ mi ne of Criner.	1-14-46	11237	10812-10922	Bromide sd; Ord	F 890; ¾"	41	1
McClain	Wayne, S.W	Big Chief Drlg. Co's Stephens 1, cse sw 24-5n-2w, 10 mi s of Purcell town.	8-26-46	7977	6561- 6571	Second Bromide sd; Ord.	236; .6 mln; 14/64"		4
Noble	Fourdee	T. T. Eason et al's Carter 1, se ne se 19-22n-1w, betw Polo and Otoe City pls.	10-10-46	5183	4808- 4811	Mississippi li; Miss	P 120	41	1
Okfuskee	Alabama, W	T. N. Berry's Catlett 1, ne nw sw 29-10n-11e, 1 mi w of Weleetka, S. pool.	9-14-46	2280	2210- 2280	Booch sd; Penn	F 13		1
Okfuskee	Garden Grove	Mid-Continent Pet Corp's Baker 1, se ne nw 31-12n-7e, 1½ mi e of Keokuk pl.	11-18-46	4361	2925- 2945	Prue sd; Penn	P 60	29	2
Okfuskee	Morse	Doak & Hughes' Franks 1, nw nw ne 20-12n-10e, 2 mi ne of N. Okemah pl.	2- 5-46	3110	3070- 3075	Waupanuka li; Penn	P 10	38	2
Okfuskee		Wilcox Oil Co's Hamby 1, se se ne 18-13n-10e, abt 2 mi nw of Haydenville pl.	4-12-46	2850	2825- 2850	Dutcher sd; Penn	P 28	38	1
Oklahoma	Coffey Creek, N.E.	Gulf Oil Corp's Moyer 1, ne se ne 15-14n-2w, 1½ mi e of Edmond, N.E. pl.	6-11-46	6169	5767- 5786	Hunton li; Devo-Sil	P 16; .9 mln		9
Okmulgee		Ryan Consol. Pet. Co's Kimble 1, se sw nw 19-14n-11e, 1 mi se of Edna, E. pl.	9-15-46	2480	2447- 2480	Dutcher sd; Penn	3/4" F 120		1
Osage	Drum Creek	A. G. Oliphant's Osage 1, sw ne ne 21-5n-4e, e of Big Bend pl.	9-27-46	3571	2852- 2881	Cleveland sd; Penn	P 30		1
Osage	G. I. Joe	Virgil Greenwood's Osage 1, se nw ne 13-22n-11e, abt 2 mi ne of Branstetter Dist.	2- 1-46	1626	1608- 1626	Tucker sd; Penn	P 100	38	5
Pittsburg		J. C. Craig's Wilkins 1-A, (OWWO) nw nw nw 8-2n-16e, 4 mi s of Ti.	10-17-46	335	262- 291	Bartlesville sd; Penn	P 4	36.5	1
Pontotoc	Byng, N.E.	J. L. Shaw's Broyles 1, ne ne nw 33-5n-6e, ¾ mi w of Conservation pl.	6-12-46	3038	2576- 2767	Hunton li; Devo-Sil	P 30		5
Pottawatomie	Tribbey, N	J. F. Smith et al's Klingensmith 1, sw sw se 23-8n-2e, abt 3½ mi w of Macomb.	5-25-46	5640	5637- 5640	Wilcox sd; Ord	F 103		2
Pottawatomie	Victory Hill	James Wise's State 1, ne ne nw 16-10n-5e, 1 mi s of Earlsboro, N. pl.	11-11-46	4754	3805- 3817	Earlsboro sd; Penn	P 32	36	1
Pottawatomie		T. N. Berry's Johnson 1, nw nw sw 27-6n-3e, 1 mi e of Washer pl.	7-29-46	1855	1840- 1855	Hoover sd; Penn	P 34; 47 wtr	....	1
Pottawatomie		J. F. Smith et al's Kerker 1, sw se nw 3-7n-3e, abt 5 mi e of Tribbey.	1-17-46	4915	4536- 4563	Hunton li; Devo	P 40	38	1

[1] "Completion horizon" indicates depth interval from which production came in discovery well. [2] Character of producing formations abbreviated thus: ch, chalk; dolo, dolomite; li, limestone; sd, sandstone; sh, shale; ser, serpentine; cgl, conglomerate. Ages of formations abbreviated thus: Plels, Pleistocene; Plio, Pliocene; Mio, Miocene; Olig, Oligocene; Eoc, Eocene; U. Cre, Upper Cretaceous; L. Cre, Lower Cretaceous; Jur, Jurassic; Tri, Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Miss, Lower Mississippian; Devo, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian. [3] Barrels of oil per day (24 hr. rate) flowing (F), pumping (P), swabbing (Sw), or bailing (B); or million cubic feet of gas daily open flow capacity; size of choke given in inches. [4] This final column shows number of producing wells at end of 1946 in the new field, new pay zone, or extension area opened by the productive exploratory well listed.

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County	Field	COMPANY, WELL AND LOCATION	Date Completed	Total Depth (Feet)	[1]Completion Horizon (Feet)	[2]Name, Character and Age of Producing Formation	[3]Initial Production: Method and Choke	Gravity of Oil	[4]Prod. Wells Year End
		OKLAHOMA—New Oil Fields—(Continued)							
Rogers		C. P. Quinlan's Martin 1, se se se 25-19n-16e, 4½ mi sw of Inola	5-29-46	445	423- 445	Bartlesville sd; Penn	F 40; 3 mln	35	1
Seminole	Garcreek	Gulf Oil Corp's Remaklus 1, sw sw nw 17-10n-7e, 1 mi w of Haney, E. fld.	8-18-46	3840	3725- 3780	Gilcrease sd; Penn	F 1101	41.2	13
Seminole	Twin Lakes	Globe Oil & Ref. Co's Davis-Patterson 1, sw sw nw 22-9n-7e, abt 2½ mi se of Seminole, E. pl.	2-15-46	3450	3430- 3450	Cromwell sd; Penn	F 130; 22 mln; ½"	38	4
Seminole		George W. Hassell's Davis-Patterson 1, ne se nw 29-7n-6e, 1 mi n of Dora pl.	11-20-46	2417	2400- 2417	Calvin sd; Penn	P 10		1
Seminole		Sam Rhodes' Letka 1, ne ne ne 32-8n-7e, 1 mi n of Little, E. pl.	11-18-46	3294	3278- 3294	Cromwell sd; Penn	F 105	36	1
Stephens	Alma, N.	Skelly Oil Co's Williams 1, se sw se 16-1s-4w, abt 4 mi e of Velma area.	1-15-46	7158	5429- 5470	Dornick Hills sd; Penn	P 100	23	1
Stephens	Velma, W.	Amerada's Sledge 1, ne sw se 8-1s-5w, 1½ mi s of Cruce pl.	2-23-46	3625	2210- 2240	Pennsylvania sd; Penn	P 7	31	21
Stephens		W. H. Atkinson et al's Peck Heirs 1, se sw sw 32-2s-6w, betw Comanche and Woolsey pls.	2-16-46	2483	2440- 2483	Arbuckle li; Cam	Sw 200	20	1
		OKLAHOMA—New Oil Pays							
Cleveland	Moore, W.	Sinclair-Prairie Oil Co's Theimer 2, swc se sw 20-10n-3w	3-25-46	8054	8030- 8050	Hunton li; Devo	F 580		1
Hughes	Holdenville, E.	B. C. Deardorff's Miller 1-A, se se se 5-7n-9e, (Twin well to Miller 1).	11-20-46	915	880- 914	Calvin sd; Penn	Sw 131		2
Lincoln	Chandler	Fred Morgan et al's Cash 1, ne ne sw 6-14n-4e, 1½ mi n of Chandler pl.	6-15-46	4310	3912- 3952	Oswego li; Penn	F 240		3
McClain	Washington	The Carter Oil Co's Vierson 1, c se ne 8-7n-3w, in Washington pl.	2- 7-46	10681	9668- 9992	Bois D'Arc li; Devo	F 445; 2½"	41	4
McClain	Wayne, S.W.	J. E. Trigg et al's White 1, nw sw se 24-5n-2w	11-19-46	6752	6606- 6630	Hunton (Bois D'Arc) li; Devo-Sil	F 30		2
Marshall	Aylesworth	Magnolia's South 2, ne ne sw 19-6s-7e	5- 9-46	667	665- 667	Trinity sd; Cre	P 35	27.5	6
Payne	Megan, N.W.	Fleet Drilling et al's Ball 1-A, ne ne sw 10-18n-3e, nw of old Mehan fld.	11- 4-46	3954	3931- 3948	Bartlesville sd; Penn	P 60		1
Payne	Ramsey	Mid-Continent Pet Co's Ramsey 4, sw se nw 18-18n-2e	5-21-46	4802	4794- 4802	2nd Wilcox sd; Ord	F 854	41.7	1
Pottawatomie	Lavoca	Willis & Becker's Spaugy 1, se nw nw 6-6n-4e	6- 1-46	4277	3777- 3797	Earlsboro sd; Penn	P 50	36.5	1
		OKLAHOMA—Oil Field Extensions							
Carter	Brock	W. F. Turner's George 1, sw sw nw 17-5s-1e, ½ mi e ext.	6-25-46	2686	2057- 2075	Pennsylvania sd; Penn	P 120		3
Cimarron	Keyes	Pure Oil Co's Johnson 1, sw sw se 12-5n-7ecm, 1 mi s of Keyes pl.	1-22-46	5010	4855- 4880	Cherokee sd; Penn	P 583	41	4
Cleveland	Moore, W.	Kenwood & Schermerhorn's Hummel 1, sw sw se 28-10n-3w, ½ mi e ext.	10- 4-46	8012	7880- 8012	Bartlesville sd; Penn	F 260		1
Cotton	Choate	William Ungerman's Campbell 1, sw sw sw nw 4-4s-10w, ½ mi ne ext.	11- 4-46	1398	1389- 1394	Pennsylvania sd; Penn	F 110	35	1
Creek	Tuskegee	W. M. Dunn's Walker 1, nw nw sw 30-14n-10e	5- 9-46	2954	2945- 2954	Dutcher sd; Penn	P 25	38	3
Garvin	Antioch, E.	Cities Service Oil Co's Wallace 1-B, nw nw sw 18-3n-1w, ½ mi mi se ext.	6-25-46	5375	5312- 5365	First Bromide sd; Ord	F 132		2
Garvin	Mayesville	Carter Oil Co's Eskridge 1, ne nw sw 19-4n-2w, ½ mi n ext.	9-27-46	7506	7312- 7345	2nd Bromide sd; Ord	F 142; 2.1 mln	64	1
Garvin	Mayesville	Standard of Kansas' Eskridge 1, ne sw sw 18-4n-2w, ½ mi nw ext.	12- 6-46	7376	7362- 7372	Bromide sd; Ord	F 324		1
Grady	Chitwood	Magnolia Pet. Co's Spiers 1, csw sw 24-5n-6w, 1 mi n ext.	9-23-46	11865	11722-11735	Pennsylvania sd; Penn	F 1080	43.7	1
Hughes	Holdenville	I. V. Horner et al's Williams 1, sw nw nw 6-7n-9e, ½ mi e ext.	7-17-46	2802	2772- 2802	Booch sd; Penn	F 150; 5 mln		1
Hughes	Spaulding, S.E.	Aylward Production Co's Lytal 1, se ne sw 16-6n-8e, 1 mi nw ext.	5- 2-46	2695	2610- 2630	Booch sd; Penn	P 35	39	4
Lincoln	Davenport	Davon Oil Co's Sporleder 1, ne ne se 33-15n-5e, ½ mi w ext.	6-18-46	3430	3356- 3428	Prue sd; Penn	F 332; 1 mln	49	2
McClain	Lindsay, N.	Frank Russell's Little (Sandburr) 1, ne nw ne 22-5n-4w, ¾ mi mi ne ext.	12- 6-46	11517	10734-10806	Viola li; Ord	F 150		1
Oklahoma	Coon Creek	A. R. Jordan et al's Delaney 1, se ne sw 3-14n-1w, ¾ mi s ext.	5-24-46	5991	5922- 5991	Wilcox sd; Ord	F 780	39.5	27
Oklahoma	Coon Creek	The Texas Co's Terrill 1, nw sw se 3-14n-1w, ½ mi se ext.	7-29-46	5996	5975- 5996	2nd Wilcox sd; Ord	F 850		
Seminole	Dora	Breco Oil Co's Woods 2, ne sw sw 27-7n-6e, ½ mi n ext.	8-14-46	2814	2791- 2814	Earlsboro sd; Penn	P 100		1
Seminole	Twin Lakes	Bowman Drlg. Co's Caster 1, ne ne nw 21-9n-7e, ¾ mi nw ext.	5-18-46	3439	3420- 3439	Cromwell sd; Penn	F 337	39	2
Seminole	Wewoka, N.E.	R. W. Brown's Fore 1, sw ne nw 16-8n-8e, ½ mi n ext.	11- 7-46	3999	3988- 3999	Misener sd; Penn	F 100		1
		OKLAHOMA—New Distillate Field							
Garvin	Maysville, S.W.	R. H. Dearing & Sons' McBride 1, ne nw nw 30-4n-2w, abt 3 mi sw of Mayesville.	4-14-46	6665	6586- 6591	Deese sd; Penn	F 192; 2.5 mln	60	4
		OKLAHOMA—New Distillate Pay							
McClain	Wayne, S.W.	Magnolia Pet. Co's Kitchens 1, nw ne nw 25-5n-2w	12- 5-46	6510	6496- 6510	Hunton li; Devo-Sil	F 50; 2 mln	60	1
		OKLAHOMA—Distillate Field Extension							
Grady	Chitwood	Magnolia Pet. Co's Britt Unit 1, se nw sw 3-4n-6w, 1 mi s ext.	3-22-46	10984	10645-10984	Basal Penn sd; Penn	F 15 mln		1
		OKLAHOMA—New Gas Fields							
Atoka		Ed J. Kubat's Gudgel 1, se ne nw 15-3s-9e, abt 1½ mi w of Boggy Depot.	2-13-46	2811	2800- 2811	Oil Creek sd; Penn	F 2.5 mln		1
Beckham	Self, N.W.	Stephens Pet. Co's Pennington 1, nw nw nw 27-8n-25w, abt 2 mi s of Erick.	5-27-46	2407	1940- 1967	Granite Wash cgl; Penn	F 1 mln		1
Creek	Milfay, S.W.	Davon Oil Co's McVey 1, ne ne nw 29-15n-7e, abt 1 mi ne of Stroud, E. pl.	2- 1-46	2915	2860- 2915	Prue sd; Penn	F 1.5 mln		3
Garvin	White Bead	Sohio's Tolbert 1, ne nw ne 9-3n-1w, abt 6 mi e of Antioch	3-26-46	4589	4535- 4540	Simpson sd; Ord	F 5.25 mln		1
Hughes	Greasy Creek	Skelly's Price 1, sw ne nw 26-8n-10e, 3½ mi se of old Yeager pl.	2-25-46	3465	3330- 3420	Cromwell sd; Penn	F 10.5 mln		1
Hughes	Papoose, S.E.	Leach & Warren's Brooks 1, ne ne sw 7-9n-10e, 4 mi nw of Wetumka.	1-13-46	2688	2658- 2688	Booch sd; Penn	F 5.25 mln		3
Lincoln	Gessman, E.	Olson Drlg. Co. et al's Masten 1, nw se sw 35-14n-4e, 1½ mi e of Cleveland.	10-10-46	3022	2995- 3022	Cleveland sd; Penn	3.5 mln		1
Lincoln	Ravendale	Kemp & Jackson's Wagner 1, ne ne ne 33-17n-6e, 2½ mi sw of Shamrock, W. District.	5-23-46	3042	3015- 3042	Bartlesville sd; Penn	F 5 mln		1
Lincoln		The Texas Co's Yeldell 1, se nw nw 11-14n-6e, 1½ mi w of Stroud pl.	7- 8-46	4060	4042- 4060	Hunton li; Sil-Devo	F 10 mln		1
Okfuskee	Bigham	Ralph Fillmore, II's Palmer 1-A, ese nw 34-11n-10e, 6 mi se Okemah town.	11-24-46	3123	3069- 3091	Gilcrease sd; Penn	1.6 mln		1
Okfuskee	Buckeye	Loftis Drlg. Co's Kennedy 1, ne ne ne 14-12n-9e, betw the Castle and Morse pls.	7-15-46	3710	3700- 3710	Hunton li; Sil	F 7 mln		1
Okfuskee	Morse, W.	Wilcox Oil Co's Lewis 1, se ne ne 24-12n-9e, abt 6 mi n of Okemah	5-17-46	3936	3180- 3196	Cromwell sd; Penn	F 2.5 mln		3
Okfuskee		Public Service Corp's Rose 1, c nw se 28-10n-12e, 6 mi se of Weleetka.	2- 5-46	2363	2355- 2363	Gilcrease sd; Penn	F 2.5 mln		1
Okfuskee		Sunray Oil Corp. et al's Sam 1, ne ne sw 10-10n-9e, 2 mi n Bearden pl.	12-10-46	3312	3056- 3070	Gilcrease sd; Penn	F 6.5 mln		1
Okmulgee		A. R. Jordan's Miller 1-A, sw sw sw 23-15n-13e, 1 mi s of Natura District.	11-20-46	1797	1518- 1527	Booch sd; Penn	1.5 mln		2
Payne	Harmony	Mulberry Oil Co's Naumann 1, ne sw se 2-17n-5e, 3 mi e of Cushing.	10-10-46	3950	2963- 3000	Cromwell sd; Penn	1.9 mln		1

[1] "Completion horizon" indicates depth interval from which production came in discovery well. [2] Character of producing formations abbreviated thus: ch, chalk; dolo, dolomite; li, limestone; sd, sandstone; sh, shale; ser, serpentine; cgl, conglomerate. Ages of formations abbreviated thus: Pleis, Pleistocene; Plio, Pliocene; Mio, Miocene; Olig, Oligocene; Eoc, Eocene; U. Cre, Upper Cretaceous; L. Cre, Lower Cretaceous; Jur, Jurassic; Tri, Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Miss, Lower Mississippian; Devo, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian. [3] Barrels of oil per day (24 hr. rate) flowing (F), pumping (P), swabbing (Sw), or bailing (B); or million cubic feet of gas daily open flow capacity; size of choke given in inches. [4] This final column shows number of producing wells at end of 1946 in the new field, new pay zone, or extension area opened by the productive exploratory well listed.

PARKERSBURG'S *New Heat Exchange Principle*

gives more oil at lower temperatures with higher API gravity

More operators than ever before have turned this winter season to Parkersburg Self-Insulating Treaters to handle their toughest emulsion treating problems. Yes, Parkersburg Treaters . . . featuring a new heat exchange principle . . . have proved the most efficient, dependable and economical treater on the market today. Take this single example: except in the most severe services, excelsior packs are unnecessary. That expense, time, trouble and labor is eliminated. Ask your Parkersburg Representative to tell you (he has all the facts and figures) the many other ways Parkersburg Self-Insulating Treaters are more efficiently . . . more economically . . . turning more emulsions into pipe line oil. So pick your toughest problem. Call Parkersburg. No other treater is capable of producing *more pipe line oil per barrel of fluid handled!*

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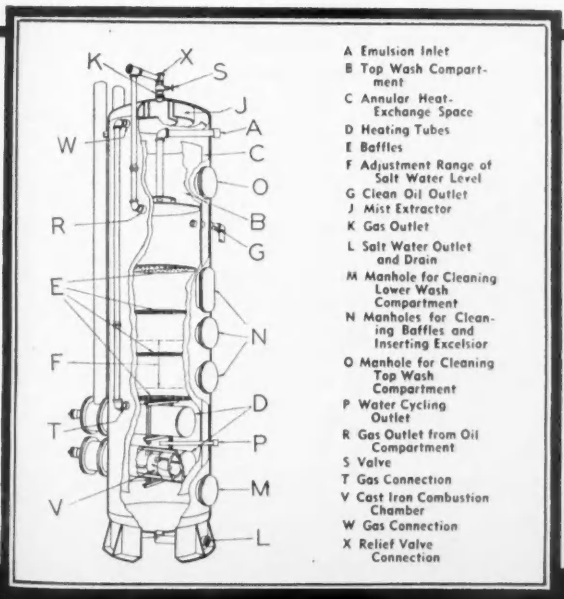
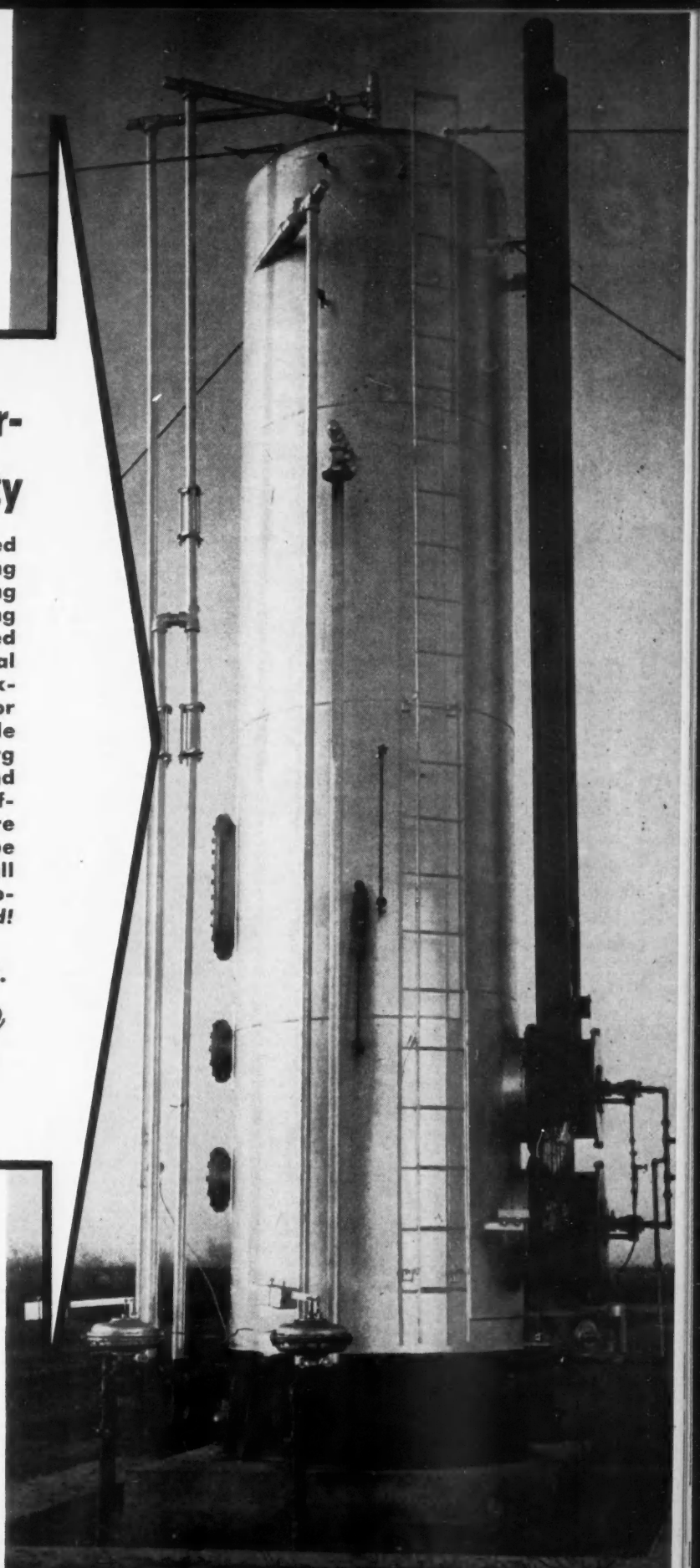


A Emulsion Inlet
B Top Wash Compartment
C Annular Heat-Exchange Space
D Heating Tubes
E Baffles
F Adjustment Range of Salt Water Level
G Clean Oil Outlet
J Mist Extractor
K Gas Outlet
L Salt Water Outlet and Drain
M Manhole for Cleaning Lower Wash Compartment
N Manholes for Cleaning Baffles and Inserting Excelsior
O Manhole for Cleaning Top Wash Compartment
P Water Cycling Outlet
R Gas Outlet from Oil Compartment
S Valve
T Gas Connection
V Cast Iron Combustion Chamber
W Gas Connection
X Relief Valve Connection



PARKERSBURG

SALIENT DATA ON PRODUCTIVE EXPLORATORY WELLS COMPLETED IN U. S. IN 1946

County	Field	COMPANY, WELL AND LOCATION	Date Completed	Total Depth (Feet)	[1]Completion Horizon (Feet)	[2]Name, Character and Age of Producing Formation	[3]Initial Production: Method and Choke	Gravity of Oil	[4]Prod. Wells Year End
		OKLAHOMA—New Oil Fields—(Continued)							
Rogers		C. P. Quinlan's Martin 1, se se se 25-19n-16e, 4½ mi sw of Inola	5-29-46	445	423- 445	Bartlesville sd; Penn	F 40; 3 mln	35	1
Seminole	Garcreek	Gulf Oil Corp's Remaklus 1, sw sw nw 17-10n-7e, 1 mi w of Haney, E. fld.	8-18-46	3840	3725- 3780	Gilcrease sd; Penn	F 1101	41.2	13
Seminole	Twin Lakes	Globe Oil & Ref. Co's Davis-Patterson 1, sw sw nw 22-9n-7e, abt 2½ mi se of Seminole, E. pl.	2-15-46	3450	3430- 3450	Cromwell sd; Penn	F 130; 22 mln; ½"	38	4
Seminole		George W. Hassell's Davis-Patterson 1, ne se nw 29-7n-6e, 1 mi n of Dora pl.	11-20-46	2417	2400- 2417	Calvin sd; Penn	P 10		1
Seminole		Sam Rhodes' Letka 1, ne ne ne 32-8n-7e, 1 mi n of Little, E. pl.	11-18-46	3294	3278- 3294	Cromwell sd; Penn	F 105	36	1
Stephens	Alma, N.	Skelly Oil Co's Williams 1, se sw se 16-1s-4w, abt 4 mi e of Velma area.	1-15-46	7158	5429- 5470	Dornick Hills sd; Penn	P 100	23	1
Stephens	Velma, W.	Amerada's Sledge 1, ne sw se 8-1s-5w, 1½ mi s of Cruce pl.	2-23-46	3625	2210- 2240	Pennsylvania sd; Penn	P 7	31	21
Stephens		W. H. Atkinson et al's Peck Heirs 1, se sw sw 32-2s-6w, betw Comanche and Woolsey pls.	2-16-46	2483	2440- 2483	Arbuckle li; Cam	Sw 200	20	1
		OKLAHOMA—New Oil Pays							
Cleveland	Moore, W.	Sinclair-Prairie Oil Co's Theimer 2, swc se sw 20-10n-3w	3-25-46	8054	8030- 8050	Hunton li; Devo	F 580		1
Hughes	Holdenville, E.	B. C. Deardorff's Miller 1-A, se se se 5-7n-9e, (Twin well to Miller 1).	11-20-46	915	880- 914	Calvin sd; Penn	Sw 131		2
Lincoln	Chandler	Fred Morgan et al's Cash 1, ne ne sw 6-14n-4e, 1½ mi n of Chandler pl.	6-15-46	4310	3912- 3952	Oswego li; Penn	F 240		3
McClain	Washington	The Carter Oil Co's Vierson 1, c se ne 8-7n-3w, in Washington pl.	2- 7-46	10681	9668- 9992	Bois D'Arc li; Devo	F 445; 2½"	41	4
McClain	Wayne, S.W.	J. E. Trigg et al's White 1, nw sw se 24-5n-2w	11-19-46	6752	6606- 6630	Hunton (Bois D'Arc) li; Devo-Sil	F 30		2
Marshall	Aylesworth	Magnolia's South 2, ne ne sw 19-6s-7e	5- 9-46	667	665- 667	Trinity sd; Cre	P 35	27.5	6
Payne	Megan, N.W.	Fleet Drilling et al's Ball 1-A, ne ne sw 10-18n-3e, nw of old Mehan fld.	11- 4-46	3954	3931- 3948	Bartlesville sd; Penn	P 60		1
Payne	Ramsey	Mid-Continent Pet Co's Ramsey 4, sw se nw 18-18n-2e	5-21-46	4802	4794- 4802	2nd Wilcox sd; Ord	F 854	41.7	1
Pottawatomie	Lavoca	Willis & Becker's Spaugy 1, se nw nw 6-6n-4e	6- 1-46	4277	3777- 3797	Earlsboro sd; Penn	P 50	36.5	1
		OKLAHOMA—Oil Field Extensions							
Carter	Brock	W. F. Turner's George 1, sw sw nw 17-5s-1e, ½ mi e ext.	6-25-46	2686	2057- 2075	Pennsylvania sd; Penn	P 120		3
Cimarron	Keyes	Pure Oil Co's Johnson 1, sw sw se 12-5n-7ecm, 1 mi s of Keyes pl.	1-22-46	5010	4855- 4880	Cherokee sd; Penn	P 583	41	4
Cleveland	Moore, W.	Kenwood & Schermerhorn's Hummel 1, sw sw se 28-10n-3w, ½ mi e ext.	10- 4-46	8012	7880- 8012	Bartlesville sd; Penn	F 260		1
Cotton	Choate	William Ungerman's Campbell 1, sw sw sw nw 4-4s-10w, ½ mi ne ext.	11- 4-46	1398	1389- 1394	Pennsylvania sd; Penn	F 110	35	1
Creek	Tuskegee	W. M. Dunn's Walker 1, nw nw sw 30-14n-10e	5- 9-46	2954	2945- 2954	Dutcher sd; Penn	P 25	38	3
Garvin	Antioch, E.	Cities Service Oil Co's Wallace 1-B, nw nw sw 18-3n-1w, ½ mi mi se ext.	6-25-46	5375	5312- 5365	First Bromide sd; Ord	F 132		2
Garvin	Mayesville	Carter Oil Co's Eskridge 1, ne nw sw 19-4n-2w, ½ mi n ext.	9-27-46	7506	7312- 7345	2nd Bromide sd; Ord	F 142; 2.1 mln	64	1
Garvin	Mayesville	Standard of Kansas' Eskridge 1, ne sw sw 18-4n-2w, ½ mi nw ext.	12- 6-46	7376	7362- 7372	Bromide sd; Ord	F 324		1
Grady	Chitwood	Magnolia Pet. Co's Spiers 1, csw sw 24-5n-6w, 1 mi n ext.	9-23-46	11865	11722-11735	Pennsylvania sd; Penn	F 1080	43.7	1
Hughes	Holdenville	I. V. Horner et al's Williams 1, sw nw nw 6-7n-9e, ½ mi e ext.	7-17-46	2802	2772- 2802	Booch sd; Penn	F 150; 5 mln		1
Hughes	Spaulding, S.E.	Aylward Production Co's Lytal 1, se ne sw 16-6n-8e, 1 mi nw ext.	5- 2-46	2695	2610- 2630	Booch sd; Penn	P 35	39	4
Lincoln	Davenport	Davon Oil Co's Sporleder 1, ne ne se 33-15n-5e, ½ mi w ext.	6-18-46	3430	3356- 3428	Prue sd; Penn	F 332; 1 mln	49	2
McClain	Lindsay, N.	Frank Russell's Little (Sandburr) 1, ne nw ne 22-5n-4w, ¾ mi mi ne ext.	12- 6-46	11517	10734-10806	Viola li; Ord	F 150		1
Oklahoma	Coon Creek	A. R. Jordan et al's Delaney 1, se ne sw 3-14n-1w, ¾ mi s ext.	5-24-46	5991	5922- 5991	Wilcox sd; Ord	F 780	39.5	27
Oklahoma	Coon Creek	The Texas Co's Terrill 1, nw sw se 3-14n-1w, ½ mi se ext.	7-29-46	5996	5975- 5996	2nd Wilcox sd; Ord	F 850		
Seminole	Dora	Breco Oil Co's Woods 2, ne sw sw 27-7n-6e, ½ mi n ext.	8-14-46	2814	2791- 2814	Earlsboro sd; Penn	P 100		1
Seminole	Twin Lakes	Bowman Drlg. Co's Caster 1, ne ne nw 21-9n-7e, ¾ mi nw ext.	5-18-46	3439	3420- 3439	Cromwell sd; Penn	F 337	39	2
Seminole	Wewoka, N.E.	R. W. Brown's Fore 1, sw ne nw 16-8n-8e, ½ mi n ext.	11- 7-46	3999	3988- 3999	Misener sd; Penn	F 100		1
		OKLAHOMA—New Distillate Field							
Garvin	Maysville, S.W.	R. H. Dearing & Sons' McBride 1, ne nw nw 30-4n-2w, abt 3 mi sw of Mayesville.	4-14-46	6665	6586- 6591	Deese sd; Penn	F 192; 2.5 mln	60	4
		OKLAHOMA—New Distillate Pay							
McClain	Wayne, S.W.	Magnolia Pet. Co's Kitchens 1, nw ne nw 25-5n-2w	12- 5-46	6510	6496- 6510	Hunton li; Devo-Sil	F 50; 2 mln	60	1
		OKLAHOMA—Distillate Field Extension							
Grady	Chitwood	Magnolia Pet. Co's Britt Unit 1, se nw sw 3-4n-6w, 1 mi s ext.	3-22-46	10984	10645-10984	Basal Penn sd; Penn	F 15 mln		1
		OKLAHOMA—New Gas Fields							
Atoka		Ed J. Kubat's Gudgel 1, se ne nw 15-3s-9e, abt 1½ mi w of Boggy Depot.	2-13-46	2811	2800- 2811	Oil Creek sd; Penn	F 2.5 mln		1
Beckham	Self, N.W.	Stephens Pet. Co's Pennington 1, nw nw nw 27-8n-25w, abt 2 mi s of Erick.	5-27-46	2407	1940- 1967	Granite Wash cgl; Penn	F 1 mln		1
Creek	Milfay, S.W.	Davon Oil Co's McVey 1, ne ne nw 29-15n-7e, abt 1 mi ne of Stroud, E. pl.	2- 1-46	2915	2860- 2915	Prue sd; Penn	F 1.5 mln		3
Garvin	White Bead	Sohio's Tolbert 1, ne nw ne 9-3n-1w, abt 6 mi e of Antioch	3-26-46	4589	4535- 4540	Simpson sd; Ord	F 5.25 mln		1
Hughes	Greasy Creek	Skelly's Price 1, sw ne nw 26-8n-10e, 3½ mi se of old Yeager pl.	2-25-46	3465	3330- 3420	Cromwell sd; Penn	F 10.5 mln		1
Hughes	Papoose, S.E.	Leach & Warren's Brooks 1, ne ne sw 7-9n-10e, 4 mi nw of Wetumka.	1-13-46	2688	2658- 2688	Booch sd; Penn	F 5.25 mln		3
Lincoln	Gessman, E.	Olson Drlg. Co. et al's Masten 1, nw se sw 35-14n-4e, 1½ mi e of Cleveland.	10-10-46	3022	2995- 3022	Cleveland sd; Penn	3.5 mln		1
Lincoln	Ravendale	Kemp & Jackson's Wagner 1, ne ne ne 33-17n-6e, 2½ mi sw of Shamrock, W. District.	5-23-46	3042	3015- 3042	Bartlesville sd; Penn	F 5 mln		1
Lincoln		The Texas Co's Yeldell 1, se nw nw 11-14n-6e, 1½ mi w of Stroud pl.	7- 8-46	4060	4042- 4060	Hunton li; Sil-Devo	F 10 mln		1
Okfuskee	Bigham	Ralph Fillmore, II's Palmer 1-A, cse nw 34-11n-10e, 6 mi se Okemah town.	11-24-46	3123	3069- 3091	Gilcrease sd; Penn	1.6 mln		1
Okfuskee	Buckeye	Loftis Drlg. Co's Kennedy 1, ne ne ne 14-12n-9e, betw the Castle and Morse pls.	7-15-46	3710	3700- 3710	Hunton li; Sil	F 7 mln		1
Okfuskee	Morse, W.	Wilcox Oil Co's Lewis 1, se ne ne 24-12n-9e, abt 6 mi n of Okemah	5-17-46	3936	3180- 3196	Cromwell sd; Penn	F 2.5 mln		3
Okfuskee		Public Service Corp's Rose 1, c nw se 28-10n-12e, 6 mi se of Weleetka.	2- 5-46	2363	2355- 2363	Gilcrease sd; Penn	F 2.5 mln		1
Okfuskee		Sunray Oil Corp. et al's Sam 1, ne ne sw 10-10n-9e, 2 mi n Bearden pl.	12-10-46	3312	3056- 3070	Gilcrease sd; Penn	F 6.5 mln		1
Okmulgee		A. R. Jordan's Miller 1-A, sw sw sw 23-15n-13e, 1 mi s of Natura District.	11-20-46	1797	1518- 1527	Booch sd; Penn	1.5 mln		2
Payne	Harmony	Mulberry Oil Co's Naumann 1, ne sw se 2-17n-5e, 3 mi e of Cushing.	10-10-46	3950	2963- 3000	Cromwell sd; Penn	1.9 mln		1

[1] "Completion horizon" indicates depth interval from which production came in discovery well. [2] Character of producing formations abbreviated thus: ch, chalk; dolo, dolomite; li, limestone; sd, sandstone; sh, shale; ser, serpentine; cgl, conglomerate. Ages of formations abbreviated thus: Pleis, Pleistocene; Plio, Pliocene; Mio, Miocene; Olig, Oligocene; Eoc, Eocene; U. Cre, Upper Cretaceous; L. Cre, Lower Cretaceous; Jur, Jurassic; Tri, Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Miss, Lower Mississippian; Devo, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian. [3] Barrels of oil per day (24 hr. rate) flowing (F), pumping (P), swabbing (Sw), or bailing (B); or million cubic feet of gas daily open flow capacity; size of choke given in inches. [4] This final column shows number of producing wells at end of 1946 in the new field, new pay zone, or extension area opened by the productive exploratory well listed.

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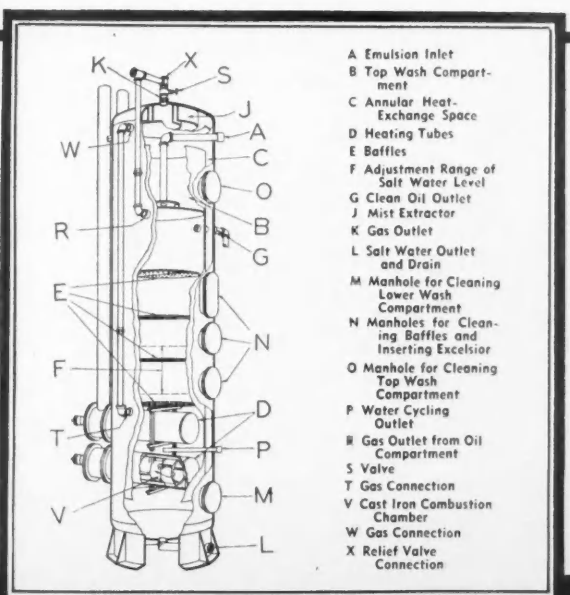

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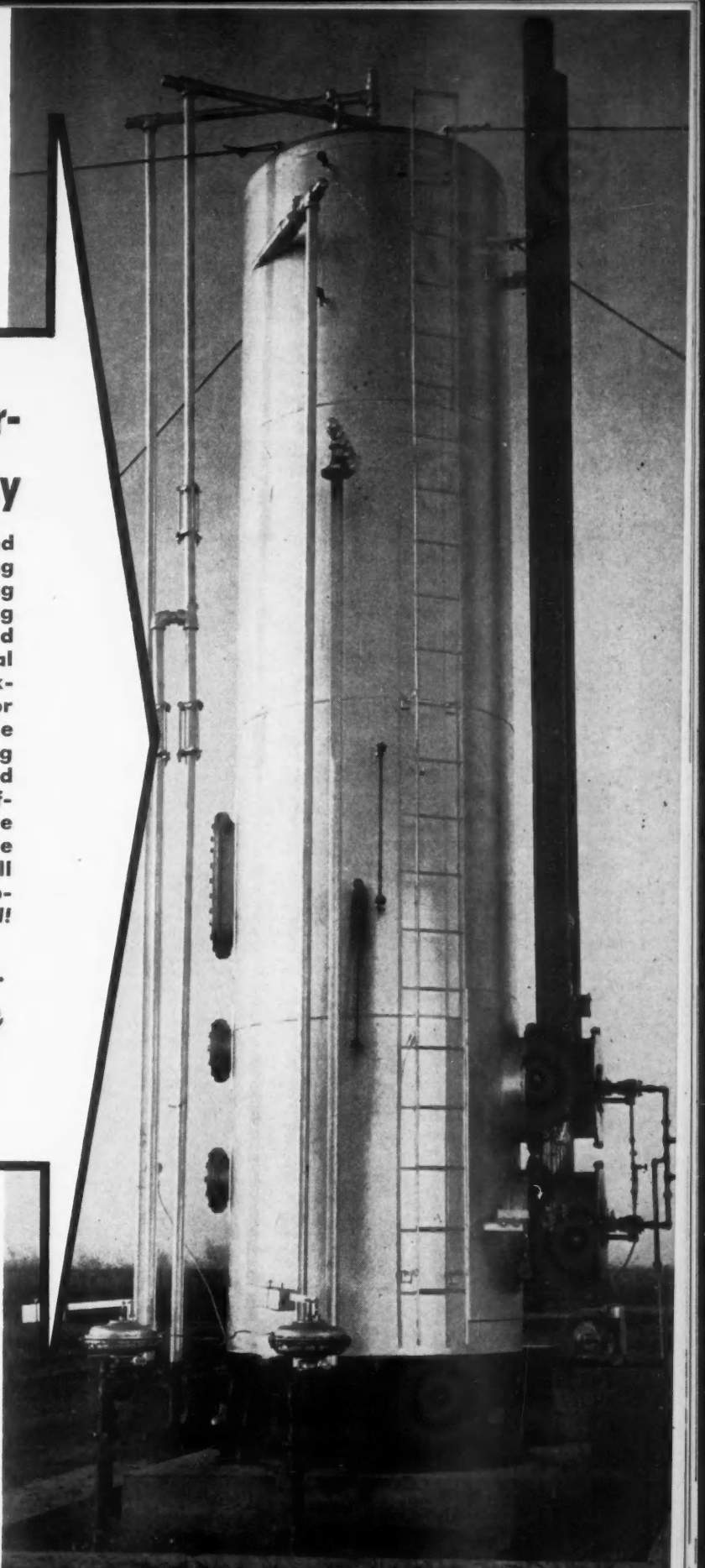
V Cast Iron Combustion Chamber
W Gas Connection
X Relief Valve Connection



PARKERSBURG

SALIENT DATA ON PRODUCTIVE EXPLORATORY WELLS COMPLETED IN U. S. IN 1946

County	Field	COMPANY, WELL AND LOCATION	Date Completed	Total Depth (Feet)	[1]Completion Horizon (Feet)	[2]Name, Character and Age of Producing Formation	[3]Initial Production: Method and Choke	Gravity of Oil	[4]Prod Wells Year End
		OKLAHOMA—New Gas Fields—(Continued)							
Payne	.....	Home Gas Co's School Land 1, nw ne sw 36-18n-4e, abt 3 mi w of Cushing.	2- 2-46	3705	3690- 3705	Bartlesville sd; Penn	F 4.5 mln	....	1
Pontotoc	Center.....	The Texas Co's Gray 1, ne se sw 18-4n-5e, abt 3 mi s of Bebee pl.	7-26-46	3248	915- 981	Pennsylvania sd; Penn	F .65 mln	....	1
Pontotoc	.....	J. E. Crosbie, Inc's Kelly 1, ne ne sw 9-4n-7e, abt 9 mi ne of Ada	1- 4-46	4456	1811- 1827	Booch sd; Penn	F 3 mln	....	1
Pontotoc	.....	W. B. Pine Estate's Doner 1, se ne sw 19-5n-7e, 4 mi e of Tyrola, E. fld.	11- 1-46	3700	1425- 1502	Thurman sd; Penn	.5 mln	....	1
Washita	Rocky.....	Atlantic Refg. Co's Hill 1, nw nw nw 25-8n-18w, abt 1 mi s of Rocky.	3-12-46	6500	6150- 6235	Pennsylvania sd; Penn	F 25 mln	....	1
		OKLAHOMA—Gas Field Extensions							
Lincoln	Kendrick.....	Woffard, Nicholson & Rose, Inc's, Naylor 1, nw sw ne 7-15n-5e, ¾ mi s ext.	8-18-46	3572	3557- 3572	Prue sd; Penn	F 19 mln	....	1
Lincoln	Ravendale.....	Roy L. Kemp's Tyner 1, se se se 28-17n-6e, 2 mi se of Avery pl, ½ mi n ext.	7- 7-46	3052	3020- 3052	Red Fork sd; Penn	F 2.2 mln	....	1
Okfuskee	Sheldon.....	George C. Vincent's Musgrave 2, cne se 17-12n-11e, ½ mi w ext.	6- 1-46	810	795- 810	Sd; Pennsylvanian	C.46 mln	....	3
		PENNSYLVANIA—New Oil Fields							
Allegheny	.....	Paul Schwer's Alcoma Country Club 1, Penn twp, abt 1 mi w of Unity.	5- -46	2048	2028- 2048	Hundred Foot sd, Devo	Sw 75	....	
Washington	.....	Beedle et al's Hugh Boyles 3	6- -46	2321	2268- 2321	Gantz sd	F 50	....	
Washington	.....	Charles E. Young's John Gregor (H. H. Beabout) 1, North Strabane twp.	6- -46	2500	- 2500	Gordon sd; Devo	F 100	....	
Washington	.....	Charles E. Young's Senkinc 2, North Strabane twp.	5- -46	2552	- 2552	Gordon sd; Devo	F 300	....	
		PENNSYLVANIA—New Gas Fields							
Armstrong	.....	Boyd & Shupp's James Dunbar 1, Kittanning twp.	1- -46	1516	1487- 1510	Thirty-Foot sd; Devo		....	
Fayette	.....	Robert E. Murray et al's Thomas Rocks 1, Luzerne twp.	5- -46	1810	1794- 1810	Injun sd; Miss	1.8 mln	....	
Fayette	.....	New Penn Development Co.-Wm. E. Snee et al's J. R. Smith, on Chestnut Ridge, Georges twp, 1¼ mi s of Barton tr prod.	9- -46	7063	7062- 7063	Onondaga chert; Devo	32 mln	....	
Fayette	.....	Peoples Natural Gas Co's H. R. Hogsett 2, Luzerne twp.	2- -46	1955	1944- 1955	Injun sd; Miss	9.4 mln	....	
Greene	.....	J. C. Johnson et al's Hal Funk 1, Washington twp.	6- -46	2806	2801- 2805	Gantz sd	.8 mln	....	
Washington	.....	Henry Lowstutter et al's George Nemchak 1, in Twilight Boro.	10- -46	1520	1509- 1520	Big Injun sd; Miss	1 mln	....	
Washington	.....	Lewis Pettit et al's Everett Baumberger 1, Amwell twp.	1- -46	1799	1780- 1785	Injun sd; Miss	.34 mln	....	
Washington	.....	Williams & Foley's R. B. Rush 1, North Strabane twp., se of the new oil pool.	6- -46	2358	2298- 2346	Fifty Foot sd; Devo	.4 mln	....	
		EAST TEXAS BORDER COUNTIES—New Oil Fields							
Harrison	Elysian Fields..	R. W. Williams' J. M. Furrh Est. 1, Francis O'Neil sur, 3 mi w Elysian flds.	2-27-46	6850	6291- 6330	Travis Peak sd; L Cre	F 20; 11/32"	31.9	1
Marion	Lassater.....	Magnolia's S. L. Orr 1, 1300 fr nl 1000 fr wl R. B. Fowler sur.	6- 6-46	10513	7577- 7586	Travis Peak sd; L Cre	P 97; 41 wtr	40.9	1
		EAST TEXAS BORDER COUNTIES—New Oil Pays							
Marion	Marion Shallow	H. W. Snowden's W. S. Sedberry 1, M. G. Nall sur, 40-ac tr.	9-22-46	2438	2420- 2430	Paluxy sd; L Cre	F 128; 3/16"	44	10
Panola	Carthage.....	Skelly's S. E. Mathews 1, Wm. McFadden sur, 3 mi e of Beckville	4-24-46	6715	6093- 6113 6246- 6256	U Pettit li; L Cre L Pettit li; L Cre	F 3.9 mln P 170	29.3	1
		EAST TEXAS BORDER COUNTIES—Distillate Field Ext.							
Harrison	Waskom.....	E. C. Johnson's G. E. Cargill 1, 2500 s 70 w 20 e fr nec Simpson Holloway sur, 576-ac lse, 16 mi e of Marshall.	9-30-46	5944	5660- 5673 5931- 5943	Pettit li; L Cre Travis Peak sd; L Cre	F 8; 2.5 mln F 527; ¼"	.... 41.6	6
		EAST TEXAS BORDER COUNTIES—New Gas Field							
Shelby	Huxley.....	Humble's Pickering Lbr. Co., 1, St. Francios sur.	3-26-46	10986	6608- 6628	Pettitt li; L Cre	F 1.8 mln; 3/16"	....	1
		EAST TEXAS BORDER COUNTIES—Gas Field Extensions							
Harrison	Harleton.....	Placid Oil Co's Mattie Lee Knox et al 1, Benjamin Parker sur, 3 mi sw Harleton, 1 mi sw ext.	2-20-46	8300	6800- 6828 7346- 8084	Rodessa sd; Jur Travis Peak sd; L Cre	F 8 mln F 20 mln	....	1
Harrison	Waskom.....	Bert Fields et al's J. M. Furrh 1, L. Womack sur, 4½ mi s of Waskom.	3-22-46	6305	5930- 5950	Travis Peak sd; L Cre	F 66; 2.2 mln; ¼"	....	1
Harrison	Waskom.....	Midstates Oil Corp's J. M. Bryson 1, W. R. Anderson sur, 2 mi s Waskom.	3-25-46	6243	5827- 6162	Pettit li; L Cre Travis Peak sd; L Cre	F 8 mln F 11.5 mln	60 60	2
Marion	Rodessa.....	Rogers Lacy's Scott 1, 1400 n 2700 e of nec L. A. McLaughlin sur, in Alex Johnson sur, 2½ mi sw ext.	1-19-46	7530	5922- 5938	Hill sd; L Cre	F 1.6 mln	....	1
		EAST TEXAS—New Oil Fields							
Cherokee	Wise.....	Watson W. Wise and Delta Drlg. Co's J. O. Huggins 1, 330 ft nsl and 960 ft wel of 117-ac tr, or 5600 ft wel and 330 ft nsl Levi Jordan sur, A-28.	8- 8-46	5116	5111- 5116	Woodbine sd; U Cre	F 90; ⅛"	41.8	5
Cherokee	.....	Tom G. Shaw, Trustee's J. H. Bolton-Pure 1, 2286 ft wel and 427 ft nsl of Chas. L. Widgeon sur, 8 mi w of Lone Star 2-pay fld, nearest prod.	3- 1-46	4177	4171- 4174	Woodbine sd; U Cre	P 38; 140 wtr	39.8	
Leon	Flynn.....	Claude Bell et al's B. W. Browne-Carson 1, 4710 ft ne of swl & 5278 ft se of nwl of Thos. H. Garner sur.	7-20-46	7303	7185- 7303	Woodbine sd; U Cre	P 8	34.8	1
Navarro	Currie Deep....	Temple Hargrove et al's Guy E. Wallace 1, 500 ft fr sw and 330 ft fr se line of 40-ac lse, or 900 ft fr MoEoNE and 330 ft fr se line of John Jones sur.	10- 5-46	6185	5447- 5454	Rodessa sdy-li; L Cre	F 39; 157 wtr 1"	23	1
Smith	Mount Sylvan...	Humble O & R Co's T. J. Pool 1, 660 ft fr M/W/N and 660 ft from M/E/E lines of 243-ac tract, or 660 ft snl and 900 ft ewl of Wm. Saunders sur, 7.4 mi se of Van fld.	5- 4-46	7668	7339- 7352	Paluxy sd-li; L Cre	F 522; ¼"	34.6	2
Smith	.....	Delta Drlg. Co's W. H. Boynton-Magnolia 1, 467 ft out nec 48.74-ac tr, or 80 ft ewl and 467 ft snl J. J. Smith sur, 2 mi e by n of Mount Sylvan fld; separated by decisive failure.	12-17-46	7727	7516- 7527	Paluxy sd; L Cre	F 283; ¼"	33.3	1
Wood	Norman-Paul...	Bobby Manziel and Billy Bridewell's A. L. Amason 1, 652 ft wel and 100 ft snl of 33-ac lse or 1700 ft snl and 542 ft e of M/E/W lines of H. Anderson sur, No. 274.	8-30-46	5522	5237- 5246 5466- 5488	Woodbine sd; U Cre	P 253	16.5	1
		EAST TEXAS—New Oil Pays							
Henderson	Opelika.....	Lone Star Prod. Co et al's Ira Buckalew 1, 675 ft snl and 920 ft from e and w lines of 52.7-ac lse, (N) Adrian Anglin sur.	3-19-46	9500	8827- 8853 9351- 9389	Rodessa sdy-li; L Cre Pettit li; L Cre	F 330; ¼" F 15 cond/ mln; 35 mln; 2"	41.9	7
Wood	Manziel	Rogers Lacy and R. J. Caraway's J. G. Shamburger 1-A, 330 ft ewl and 2300 ft nsl Jas. Moore sur, 37, ne edge of multi-pay structure.	8-10-46	6413	4146- 4166	Sub-Clarksville sd; U Cre	P 113	16.2	5
Wood	Manziel	Magnolia Pet. Co's Malone-Taylor Unit 2, 330 ft ewl and 467 ft snl of J. C. Taylor 50½-ac tr, John Polk sur, offsetting Paluxy prod.	8-14-46	6585	4784- 4790	Woodbine (Dexter) sd; U Cre	P 261; 65 wtr	26	1
Wood	Norman-Paul...	Sun Oil Co's C. L. Clanton 1, 467 ft out of nec 86-ac lse, or 1100 ft nsl and 467 ft wel of Allen Davey sur, 1694 ft sw of Woodbine sd discovery.	12- 3-46	5562	4833- 4858	Sub-Clarksville sd; U Cre	F 180; ¼"	33	1

[1] "Completion horizon" indicates depth interval from which production came in discovery well. [2] Character of producing formations abbreviated thus: ch, chalk; dolo, dolomite; li, limestone; sd, sandstone; sh, shale; ser, serpentine; cgl, conglomerate. Ages of formations abbreviated thus: Pleis, Pleistocene; Plio, Pliocene; Mio, Miocene; Olig, Oligocene; Eoc, Eocene; U. Cre, Upper Cretaceous; L. Cre, Lower Cretaceous; Jur, Jurassic; Tri, Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Miss, Lower Mississippian; Devo, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian. [3] Barrels of oil per day (24 hr. rate) flowing (F), pumping (P), swabbing (Sw), or bailing (B); or million cubic feet of gas daily open flow capacity; size of choke given in inches. [4] This final column shows number of producing wells at end of 1946 in the new field, new pay zone, or extension area opened by the productive exploratory well listed.

For Precision Threading at High Production

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The LANDMACO Threading Machine equipped with the LANCO Head will give you quality threads at low operating cost.

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SALIENT DATA ON PRODUCTIVE EXPLORATORY WELLS COMPLETED IN U. S. IN 1946

County	Field	COMPANY, WELL AND LOCATION	Date Completed	Total Depth (Feet)	[1]Completion Horizon (Feet)	[2]Name, Character and Age of Producing Formation	[3]Initial Production: Method and Choke	Gravity of Oil	[4]Prod. Wells Year End
		EAST TEXAS—Oil Field Extensions							
Leon	Flynn	Daniel-Oil Co's Mrs. F. A. Cox 1, 467 fr nw and sw lines of 220-ac lse, or 2775 fr ne and 2950 fr nw of John Scritchfield sur, 1½ mi w by s of discovery.	12- 7-46	7444	7036- 7362	Woodbine sdy-sh; U U Cre	F 73; 3% wtr ¼"	33	1
Smith	Sand Flat	B. F. Phillips et al's (was C. L. Wickliffe et al's) O. Hackett-Pure 1, 800 ft nsl and e of e&w lines of 51-ac tr, 3150 ft nsl and 3050 ft ewl of Samuel Leeper sur, 2 mi n ext.	12-13-45	9852	7277- 7284	Paluxy li; L Cre	P 135; 20% wtr	23.6	
		EAST TEXAS—New Distillate Fields							
Bowie		Barnsdall Oil Co.-Sohio Pet. Co-Phillips Pet. Co's Ivey Pickering 1, 480 ft wel and 330 ft fr nwl of 35-ac lse, or 2600 ft nsl and 510 ft ewl of R. E. Sevey sur, A-523.	5-29-46	7501	7030- 7088	Smackover li; Jur	168; 8 mln	71.7	1
Rusk		Delta Drlg. Co.-The Chicago Corp's C. G. Rayford 1, 6825 ft ewl and 6000 ft nsl of James Smith sur, A-709, 3¾ mi se of Henderson 2-pay deep area, nearest.	3-26-46	7519	7310- 7464	Travis Peak sdy-li; L Cre	13; 7 mln; ⅛"	61.3	1
		EAST TEXAS—Gas Field Extension							
Freestone	Fairfield	Barney Carter et al's (was R. L. Wheelock's) F. E. Hill 1, 1980 ft nsl and 4400 ft ewl of Hugh S. Shepherd sur, org owner abnd 8-43; 1½ mi n by e of Fairfield 2-pay gas fld.	1- 3-46	4240	4174- 4184	Woodbine sd; U Cre	F 27 mln	....	1
		NORTH TEXAS—New Oil Fields							
Archer		Bridwell Oil Co's Oil Investment Co. 1-F, 3127 ft ewl and 2157 ft nsl blk 125, John Richards-J. W. Harris subdiv, near old shallow pool.	12-26-45	4925	4860- 4866	Bend li; Penn	P 8; 2 wtr	40.6	1
Archer		Cochran and Cain's Virgil Seay 2, 150 ft out nwc blk 69, J. W. Harris subdiv, 1½ mi from prod.	6-11-46	1159	1148- 1156	Cisco sd; Penn	P 10	38	10
Archer		L. R. Dawson Jr. and Barnes' C. L. Abercrombie 1, 2100 ft nsl and 2500 ft wel of blk 152, J. W. Harris subdiv.	4-26-46	1069	1060- 1066	Cisco sd; Penn	P 20; 10 wtr	38	3
Archer		Clyde Gibson et al's L. F. Wilson-McCrory 2-A, 330 ft nsl and 280 ft ewl sec. 55, ATNCL sur, twin to 4816-ft failure. ⅞ mi e of prod with intermediate dry holes.	8- 7-46	1467	1459- 1467	Cisco sd; Penn	P 50	39	1
Archer		Grace & Grace's A. B. Edwards 1, 330 ft out nec w½ lot 16, L. P. Hunt subdiv. of Geo. C. Bruner sur, A-8, 2⅛ mi se Scotland multi-pay fld, nearest.	6-10-46	5741	5490- 5500	Basal Bend cgl; Penn	P 35; 35 wtr	38	1
Archer		Harvey Drlg Co's C. L. Abercrombie 1-A, 750 ft nsl and 1500 ft wel F. M. Taber sur, A-723, ⅔ mi e of prod with intermediate dry holes.	7-24-46	1277	1272- 1277	Cisco sd; Penn	P 10	40.3	5
Archer		Smiley-Norwood Drlg Co's A. L. Harris 1, 1050 ft nsl and 150 ft ewl of blk 71, J. W. Harris subdiv, 3500 ft w of prod and separated by failures.	5- 4-46	1135	1122- 1126	Cisco sd; Penn	P 45	38	3
Archer		Staley Oil Co's V. D. Powell 2, 275 ft nsl and 1225 ft wel of e 100-ac tr and J. M. Armstrong sur, A-763, ⅔ mi e of prod., but separated by failures.	11- 4-46 11- 4-46	942 942	938- 942 938- 942	Cisco sd; Penn Cisco sd; Penn	P 10 P 10	40 40	1 1
Clay	Henrietta, E	Jack Grace et al's Bryant Edwards 1-C, 1305 ft w and 1891 ft n of swc blk 34, Marion CSL sur, but in S. C. Beldon sur, A-12, 2½ mi nw of Hapgood pl.	11-20-46	6088	6070- 6088	Bend cgl; Penn	F 1800; 1"	45	2
Clay		R. C. Lipscomb et al's Hapgood 1-A, 467 ft out of nwc blk 78, Marion Co. School Lds, A-308, 1½ mi se of Hapgood pl.	12-23-46	5002	4975- 5002	Strawn sd; Penn	P 127	41	1
Cooke		Burk Royalty Co's C. N. Bentley 1, 330 ft out of nwc of 10.7-ac lse, or 1550 ft s & 930 ft e of sec of S. D. Brown sur, A-95, but in A. C. C. Bailey sur, A-44, 1¼ mi sw of Almon fld, but separated by failures.	8-21-46	2233	2194- 2197	Strawn sdy-sh; Penn	P 27	40	1
Cooke		Hollandsworth Drlg. Co's H. E. King 1, 150 ft out of nwc of 40-ac lse, or 750 ft nsl and 150 ft ewl of 253.6-ac tr, M. Langham sur A-564, ⅞ mi se of prod.	11- 1-46	1010	1005- 1010	Cisco sd; Penn	P 10	....	1
Grayson	Handy	The Texas Co's J. R. Handy 2, 2278 ft snl and 875 ft ewl of s 508½ acs of 1063-ac tr, Samuel Stewart sur, A-1069, ¼ mi nw of 339-ft failures.	7-20-46	1699	1665- 1698	Strawn sd; Penn	F 509; ½"	39.6	1
Haskell	Humphrey-Chapman	Thos. D. Humphrey et al's E. O. Chapman 1, 467 ft out of nec blk 60, H. Tidwell sur, A-385, 3 mi ne Lawson fld.	12- 4-46	5470	4070- 4082	Strawn li; Penn	P & F 469; 8% wtr	40	1
Jack		Hanlon & Buchanan, Inc's J. Moore 1-B, 330 ft snl and 1320 ft ewl of ne¼ BBB&C Ry. sec 2, A-1376, near shallow pl.	7-21-46	6008	5890- 6008	Ellenburger dolo; Ord	P 15; 7 wtr	41	1
Jack		Stephens Pet. Co's P. A. Jackson 1, 1181 ft snl and 1267 ft ewl W. C. Ry. Co. 1, A-904.	3-11-46	5253	4717- 4727	Bend li; Penn	P 4	....	1
Knox	Truscott	Cities Service Oil Co's Doris Mulkey 1, c nw nw H&TC Ry. 163 blk 44, 2 mi s of Truscott; 16¾ mi ne of prod.	6-26-46	6785	6225- 6247	Bend li; Penn	P 10	48	1
Montague	Caudle	L. S. Youngblood and R. L. Foree's Joe Benton 2, 3715 ft nsl and 6017 ft ewl of Abel A. Lewis sur. A-420, 2¾ mi s of Benson, 3-well pl, nearest.	3-22-46	6243	6132- 6142	Bend cgl; Penn	F 3132; ¾"	43	1
Montague	Lewis-Stuart	Continental Oil Co.-Staley Oil Co's J. B. Lewis 1-B, 330 ft out swc of 77¾ ac lse, or 330 ft nsl and 7150 ft fr M/W/W line of N. S. Ussery sur, A-824, 2½ mi se Hildreth fld.	9- 8-46	6458	6348- 6356	Bend cgl; Penn	F 1256; ½"	41	2
Montague		S. D. Johnson et al's Lee Crenshaw 1, 2002 ft nsl and 2196 ft wel of W. Wallace sur, A-834, 1⅝ mi nw of Belcherville 5300-ft Bend cgl fld.	1- 1-46	5721	5550- 5565	Bend cgl; Penn	P 75; 4 wtr	47	1
Wichita		The Texas Co's Ed. Foster 2, 1025 ft n and 330 ft w of swc TE&L Co. 831, but in Stephen Dennison sur, A-64, 2400 ft nw of prod, but separated by failures.	10-31-46	3200	1885- 1895	Cisco sd; Penn	P 24	40	1
Wilbarger	Tolbert	National Associated Pet. Co.-The Texas Co's J. D. Crouch 1, nw nw ne H&TC Ry. 24, blk 16, 6 mi sw of Odell fld.	11-14-46	5612	5015- 5039	Canyon (Palo Pinto) li	F 129; 1/16"	41.7	1
Wilbarger	Victory	National Associated Pet. Co's Schmoker 1, c n½ nw ne H&TC Ry. 111, blk 14, 2½ mi n of prod.	6-10-46 6-10-46	5728 5728	3502- 3527 3502- 3527	Canyon sd; Penn Canyon sd; Penn	F 352; 21 wtr 1/2"	37	4
Wilbarger		Ed. C. Lawson-Anderson-Prichard Oil Corp's W. J. Baker 2, sw sw ne H&TC Ry. 85, blk 14, 1½ mi nw of multi-pay fld.	9- 4-46	3310	3298- 3310	Canyon sd; Penn	P 93	39.3	1
Wilbarger		Paradise Oil Co. et al's W. T. Waggoner Est. 1-G, c e½ se se H&TC Ry. 39, blk 2, 2½ mi sw of Rock Crossing fld.	2-28-46	4652	4502- 4516	Ellenburger dolo; Ord	F 504; ⅜"	40	1
Wilbarger		Paradise Oil Co's W. T. Waggoner 1-I, 520 ft wel and 1045 ft nsl H&TC Ry. 11, blk 14, 1¾ mi n by e of prod.	12- 3-46	4964	3147- 3155	Canyon li; Penn	F 480; ⅜"	38	1
Young	Davis	Robert C. Davis et al's Baldwin-Lovett 1, 750 ft snl and 1083 ft ewl TE&L Co. sec 207, 2 mi se nearest deep prod.	7-13-46	4865	4844- 4859	Mississippi li; Miss	F 476; 1/2"	44	2
Young	Dillard-Mississippi	A. R. Dillard et al's M. Killian 1, 330 ft snl and 1650 ft wel sec 211, TE&L Co. sur, 1⅞ mi e by s of Crain fld, nearest dp ar.	7-21-46	4965	4944- 4960	Mississippi li; Miss	F 280; 1"	44	5
Young	Kendall	Hanlon & Buchanan, Inc's Lena Kendall 1, 2271 ft snl and 2621 ft ewl sec. 4, J. Crosby sur, A-1722; 1½ mi s by w of prod.	2-15-46	3481	3466- 3481	Bend li; Penn	F 316; ¼"	42	8
Young		L. T. Burns et al's J. P. Dunagan 1, 330 ft out of nec sec. 170, TE&L Co sur, ¼ mi n of Crain pl discovery.	1-27-46	5240	5048- 5064	Mississippi li; Miss	F 2000; ½"	41	1

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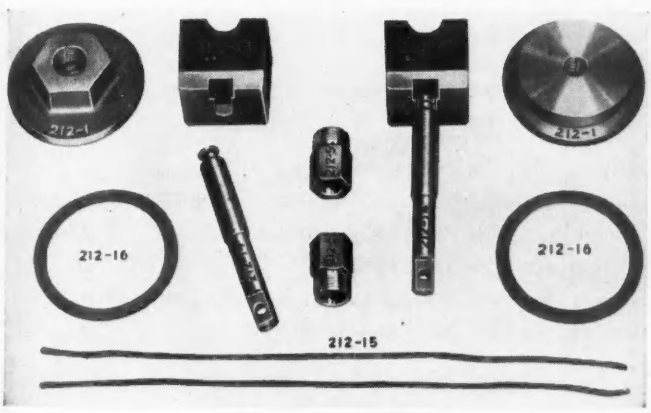
The Ratigan No. 212 Blowout Preventer is designed for maximum safety and convenience in operation. It is a new, improved unit with new type retractable rubbers which can be changed more rapidly . . . to change rubbers it is only necessary to unscrew the plugs at each end. (Refer to parts illustration below.) The Ratigan



No. 212 Blowout Preventer can also be used for swabbing or running rods in wells that head or flow in the course of operation.

The Ratigan No. 212 Blowout Preventer is manufactured in 2½" and 3" sizes. The 2½" size is supplied both plain and upset. The 2½" plain can be furnished in double female, but if male and female are required, a short nipple can be used to accomplish this. The 2½" upset can be made in male and female or double female. The 3" size is supplied male and female only; however, the male connection easily can be converted to female by installing a 3" collar, thus making a double-female unit. Two or these blowout preventers of the same size, with a nipple of any required length in between make a very efficient unit for swabbing.

Ratigan Products are described on pages 3173-3192 of the 1947 Composite Catalog.

J. P. RATIGAN, INC.

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RATIGAN PRODUCTS ARE SOLD THROUGH LEADING SUPPLY STORES

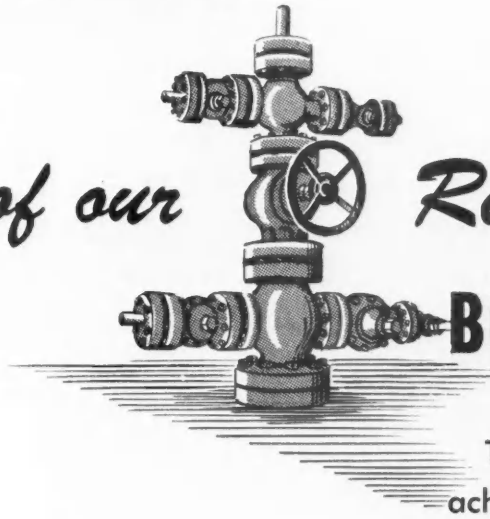
SALIENT DATA ON PRODUCTIVE EXPLORATORY WELLS COMPLETED IN U. S. IN 1946

County	Field	COMPANY, WELL AND LOCATION	Date Completed	Total Depth (Feet)	[1]Completion Horizon (Feet)	[2]Name, Character and Age of Producing Formation	[3]Initial Production: Method and Choke	Gravity of Oil	[4]Prod. Wells Year End
		NORTH TEXAS—New Oil Fields—(Continued)							
Young		Henry Craig et al's H. Hennig 3, 450 ft wel and 208 ft nsl of of nw¼ sec. 65, TE&L Co. sur, 1¼ mi sw of nearest prod.	5-18-46	1069	1066- 1069	Gunsight sd; Penn	P 8	38	2
Young		Nu-Enamel Oil Operating Co's A. A. Donnell 1, 467 ft out nwc sec 1205, TE&L Co. sur.	8-12-46	3402	1759- 1780	Canyon sd; Penn	P 31; 4 wtr	40	1
Young		H. W. Snowden Oil & Gas Co's D. L. Sheppard 1, 330 ft out of nwc of sec 1950, TE&L Co sur, ⅞ mi nw of 2945-ft prod.	11-26-46	3018	3006- 3018	Strawn sd; Penn	F 326; 8/32"	41	1
Young		Timberlake and H. M. Kelleher's W. J. Bryant-Rose-Hamilton 1, 3370 ft s and 508 ft e of nwc TE&L sec 1369, but in TE&L Fractional sec 3401, 1 mi s by w of prod.	5- 1-46	954	948- 952	Cisco sd; Penn	P 15		2
		NORTH TEXAS—New Oil Pays							
Archer	Burns-Benson	H. W. Snowden O & G Co's J. E. Morrison 2, 967 ft ewl and 1700 ft snl TE&L Co sec 1823, 933 ft w of 4500-ft Bend prod.	7-13-46	4340	4316- 4340	Strawn sd; Penn	P 218	42.8	2
Archer	Manning-Nichols	Fred M. Manning, Inc's Wallace Ford 1-A, 1420 ft snl and 1100 ft ewl, H&TC Ry. 19, blk 1, ¾ mi w by n of 3 well Ellenburger pl.	1-29-46	4163	4130- 4163	Strawn sd; Penn	P & F 144	42.4	1
Archer	Manning-Nichols	Fred M. Manning, Inc's 1st Evangelical Church Unit 1, 1263 ft snl and 330 ft ewl of H&TC Ry 19, blk 1, w by n offset to 4100-ft prod.	10-28-46	4410	4387- 4410	Strawn sdy-li; Penn	P 150	40	2
Archer	Scotland "4500"	Shell Oil Co's W. M. Coleman 3-A, 990 ft snl and 330 ft wel Lot 3, sec 74, ATNCL sur, PB after depleting 5100-ft Bend pay	9-21-46	5196	4542-4584	Strawn sd; Penn	P 103; 2 wtr	40.7	2
Archer	Scotland "M" zone	Shell Oil Co's W. M. Coleman 1-B, 330 ft out sec lot 1, sec 74, ATNCL sur, orginally completed 1-21-41 in Bend at 4979-5050 ft; PB to stray sand.	9- 2-46	5050	3658- 3700	Strawn sd; Penn	P 169; 9 wtr	40	1
Archer		L. T. Burns et al's L. F. Wilson 5-P, 990 ft snl and 450 ft wel sec 115, ATNCL, offsetting shlw wildcat pumper.	4-20-46	4892	3879- 3902	Strawn sd; Penn	P 17; 12 wtr	40	1
Clay	Heard	L. T. Burns et al's J. E. Ford 1, 467 ft out of sec of ne ¼ sec sec 3221, TE&L Co sur, ⅜ mi nw of Ellenburger disc.	3-22-46	6701	5751- 5761	Bend li; Penn	F 560; ½"	45	1
Cooke	Almon	J. R. & Adam Seitz et al's Glen Davis 1, 330 ft out of swc Thos. Rutledge sur.	7- 3-46	4138	2359-2370	Strawn sd; Penn	P 60	40.5	3
Cooke	Almon	Fred Snuggs-McElreath-Neal & Kingery's Almon-Sun 7, 550 ft s and 200 ft w of nwc of J. M. Randolph sur A-868, but in A. C. C. Baily sur A-44.	8-10-46	3944	3934- 3944	Strawn (Basal) sd; Penn	P 120	25	2
Cooke	Grant-Modesett	Fred Snuggs and K. R. Neal's Mary Dennis 1, 1095 ft nsl and 957 ft ewl of Hugh Henderson sur A-444, ⅜ mi n of 1800 ft prod.	12- 6-46	2174	2168- 2174	Strawn sd; Penn	P 115	37	1
Cooke	Sivels Bend	Standard Oil Co of Texas' Isham Beasley 2, 610 ft nsl and 2145 ft ewl of 519-ac lse, J. McKerley sur A-639.	2-28-46	9164	8905- 8940	Ellenburger dolo; Ord	F 166; ¼"	41.7	
Wichita	Madden	Consolidated Oil Co et al's H. H. Wade 2, 990 ft snl and 2041 ft ewl Labor 6, lge 2, Denton Co. Schl Lds, 660 ft s of 4200 ft Strawn prod.	11-18-46	1328	1297- 1328	Cisco sd; Penn	P 62; 48 wtr	42	4
Wichita	Madden	W. H. Hammon-Warren Pet. Corp's D. G. Parker 1, 467 ft out sec blk 26, Palo Pinto CSL sur, nw edge of Strawn prod.	8-26-46	5268	5248- 5268	Ellenburger dolo; Ord	F 168; ⅜"	42	2
Wilbarger	Harrold-Strawn	Big Six Oil Co's Schlaffke-Morris 1-A, 760 ft nsl and 737 ft wel H&TC Ry 3, blk 14, originally completed 12-3-44 as Mississippi pay disc & PB.	12- 3-46	5146	4230- 4236	Strawn li; Penn	F 516; ¾"	45	1
Wilbarger	National	National Associated Pet. Co's Sam Kelly 4-A, nw ne nw H&TC Ry 30, blk 13.	1-24-46	4925	4454- 4478	Bend li; Penn	P 160; 8 wtr	40	5
Wilbarger	National	National Associated Pet. Co's Sam Kelly 5-B, sw nw se H&TC Ry 36, blk 13.	2- 6-46	4895	4306- 4318	Basal Strawn (KMA) li; Penn	F 456; ½"	38	
Young	Garvey	R. S. LeSage et al's C. K. Garvey 2, 330 ft nsl and 750 ft wel of sw¼ sec 1, A. B. Jamison sur, A-1686, W/O to 4300-ft Bend prod.	7- 7-46	3648	3640- 3648	Strawn sd; Penn	P 12	40	
Young	Logan	Hanlon & Buchanan, Inc. & Ben Rankin's M. Logan 1, 330 ft s and 450 ft e of swc of E. L. Douglas sur A-2157, but in sect 3, J. Poitevent sur A-228, ½ mi ne of 4500-ft Marble Falls discovery pumper.	1-23-46	4014	4002- 4009	Bend li; Penn	F 81; 7/32"	41	1
Young		L. T. Burns et al's C. Ellis 2, 450 ft snl and 1400 ft ewl of s½ sec 207, TE&L Co. sur.	10-12-46	772	764- 772	Cisco sd; Penn	P 9	40	2
		NORTH TEXAS—Oil Field Extensions							
Archer	Burns-Benson	Homer W. Snowden et al's J. E. Morrison 1, 1700 ft snl and 1900 ft fr ewl sec 1823, TE&L Co sur, 1 mi ne ext.	5- 5-46	5236	4495- 4530	Bend li; Penn	F 206; ¼"	41.5	8
Montague	Bowers	Eason Oil Co's T. Yarbrough 1, 2150 ft fr M/N/N and 1500 ft fr M/W/E lines of F. J. Bellows sur A-33, 1 mi s of Bowers fld.	12-14-46	4118	4054- 4068 4084- 4101	Strawn sd; Penn	P & F 328; 2% wtr	39.6	1
Young	Kendall	John T. Cox et al's R. W. Davis 1, se se se S.P.Ry. 1, A-264, 1¼ mi e by n ext.	9-16-46	3576	3558- 3576	Bend li; Penn	F 70; 2.5 mln		1
		NORTH TEXAS—New Gas Fields							
Jack		Continental Oil Co's Tom Cherryhomes 1-C, 330 ft s and 1263 ft w of M/S/NWc of J. P. Montgomery sur A-981, but in F. Payne sur A-1564.	9- 3-46	5656	4577- 4590	Bend cgl; Penn	F .8 mln; 2"		1
Jack		Continental Oil Co's W. H. Heath 1, 330 ft out of nec of 59-ac tr, C. A. Beaty sur A-1358, 7/16 mi sw of the 2900-ft Webb 1-well pl.	6-22-46	6214	4432- 4442	Bend li; Penn	1.07 mln		1
		NORTH TEXAS—New Gas Pay							
Grayson	Handy	The Texas Co's J. R. Handy 3, 4690 ft nsl and 3700 ft ewl of Samuel Stewart sur A-1069, ne offset to 1665-ft flowing oil dis.	9- 4-46	1286	398- 402	Sd; Cretaceous	F .5 mln; 2"		1
		WEST CENTRAL TEXAS—New Oil Fields							
Coleman	Burroughs	Stewart Oil Co's Burroughs 1, nw nw sw HT&B Ry 4, ¾ mi n by w of Silver Valley.	6-19-46	3487	3144- 3164	L Jennings sd; Penn	P 55	42.5	1
Coleman	Moore	Coleman Gas & Oil Co's E. W. Moore 1, 990 ft out of nec Labor 6, Lge 496, Wharton Co. School Lands.	9-10-46	1475	1464- 1475	Fry sd; Penn	P 77	30	2
Coleman	Templeton	Fulwiler and Hughes Drlg. Co's T. Templeton 1, 450 ft snl and 330 ft ewl HT&B Ry 8, blk 1.	3-15-46	3487	3457- 3487	Strawn (Gray) sd; Penn	F 1135; 14/12"	45	2
Eastland		J. D. Sandifer Jr. et al's (was J. W. Sewell's) G. P. Brawner 2, 150 ft nsl and 550 ft wel sw ne E. T. Ry 25, blk 2, 1 mi se of depleted prod.	8-24-46	1061	1058- 1061	Strawn sd; Penn	P 28	38	1
Fisher	Eskota	Skelly Oil Co's D. O. Huddleston 1, 2875 ft snl and 1675 ft ewl of T&P Ry 11, blk 19, 2 mi w of shallower prod in Jones Co.	8-17-46	4405	4309- 4405	Palo Pinto (Basal Canyon) sdy-li; Penn	F 805; 2"	42	3
Jones	Cade	R. H. Roark-F. Hooker et al's L. R. Cade 1, 330 ft out of nwc labor 4, lge 150, DeWitt Co. School Lds, 1⅝ mi se of prod.	10- 3-46	4603	2996- 3013	Swastika sd; Penn	P 92	42	1
Jones	Grove	Delta Oil Co's W. H. Grove 1, 330 ft out nec subdiv 1, J. W. McKissick sur 204, 1½ mi s of Hawthorne pl and separated by failures.	10-13-46	2682	2680- 2682	L Hope li; Penn	P 132	41	1
Jones	Hart	M. E. Hart et al's Morrison Est. 1, 330 ft out of swc of 200-ac lse, or 5645 ft snl and 4912 ft ewl of David T. Bruce sur, No. 135, 1⅝ mi sw of Akard fld.	9- 2-46	2186	2172- 2183	Flippen sd; Penn	P 91; 5% wtr	41	2

[1] "Completion horizon" indicates depth interval from which production came in discovery well. [2] Character of producing formations abbreviated thus: ch, chalk; dolo, dolomite; li, limestone; sd, sandstone; sh, shale; ser, serpentine; cgl, conglomerate. Ages of formations abbreviated thus: Pleis, Pleistocene; Plio, Pliocene; Mio, Miocene; Olig, Oligocene; Eoc, Eocene; U. Cre, Upper Cretaceous; L. Cre, Lower Cretaceous; Jur, Jurassic; Tri, Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Miss, Lower Mississippian; Devo, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian. [3] Barrels of oil per day (24 hr. rate) flowing (F), pumping (P), swabbing (Sw), or bailing (B); or million cubic feet of gas daily open flow capacity; size of choke given in inches. [4] This final column shows number of producing wells at end of 1946 in the new field, new pay zone, or extension area opened by the productive exploratory well listed.

63.6%

of our Recommendations



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SALIENT DATA ON PRODUCTIVE EXPLORATORY WELLS COMPLETED IN U. S. IN 1946

County	Field	COMPANY, WELL AND LOCATION	Date Completed	Total Depth (Feet)	[1]Completion Horizon (Feet)	[2]Name, Character and Age of Producing Formation	[3]Initial Production: Method and Choke	Gravity of Oil	[4]Prod. Wells Year End
		WEST CENTRAL TEXAS—New Oil Fields—(Continued)							
Jones	Minter	Verne E. Autry-West Central Drlg Co's W. A. Minter 1, 710 ft snl and 330 ft wel S.P.Ry 30, blk 2, 4½ mi sw Meianda pl, nearest.	8-27-46	3450	3439- 3443	Swastika sd; Penn	F 288; $\frac{4}{16}$"	43	2
Jones	Pitzer	R. H. Roark et al's E. T. Pitzer 1, 2640 ft e and 330 ft s of nwc Labor 25, but in nwc of Labor 19, Lge 150, DeWitt Co. School Lds, 2⅜ mi se of prod.	10-13-46	5321	4539- 4550	Strawn sd; Penn	F 115; $\frac{4}{16}$"	44	
Jones		Harry W. Elliott et al's Otto Roberts 1, 2492 ft snl and 2168 ft wel of John Gasner sur, 8, 1½ mi sw of prod.	9-12-46	1652	1645- 1650	Bluff Creek sd; Penn	P 16; 66% wtr	36	1
Jones		R. H. Roark-L. F. Hooker et al's F. C. Hodges 1, 467 ft snl and 1650 ft ewl of A. Bell sur 6, 1¼ mi se of prod.	10- 3-46	1944	1939- 1944	Gunsight li; Penn	P 25	38	1
Nolan		Sohio Pet. Co's Irl Faver 1, c nw nw T&P Ry. 50, blk 21, 5 mi e by s of Sweetwater; 10 mi sw of nearest prod.	8-13-46	5836	5671- 5682	Strawn sd; Penn	P 8; 8 wtr	41.8	1
Palo Pinto		Ashland O & R Co's S. F. Lee 1, 330 ft out of swc sect 1744, TE&L Co. sur, 1¼ mi se of shallow gassers.	3- 3-46	5046	5039- 5046	Ellenburger dolo; Ord	P 73; 70 wtr	40.1	1
Runnels		Geochemical Surveys, Inc. & W. R. Ransome et al's J. W. Harris 1-A, 695 ft snl and 2230 ft wel of 184-ac tr and J. V. Cabrera sur 514, 8 mi ne of prod.	11- 9-46	4085	3900- 3920	Strawn (Gardner) sd; Penn	F 59; 2"	42	1
Shackelford	Hubbard Creek	Phillips Pet. Co's Ace Hickman-Pan 1, 944 ft nsl and 1665 ft wel of ne¼ sec 16, Lunatic Asylum Lds, 1½ mi w of Sedwick; between shallow pools.	3- 7-46	4220	4210- 4220	Ellenburger dolo; Ord	F 1420; ½"	44.8	1
Shackelford		Allied Oil Co's L. A. Sanders 1, 467 ft out of ec sec 583, TE&L Co sur, 4 mi ne of Albany.	3-18-46	4540	4535- 4540	Ellenburger dolo; Ord	F 543; 24 wtr 2"	42.6	5
Shackelford		Hedrick Oil Co.-Jones & Stasney's Dawson & Conway 1, nw ne nw, E. T. Ry. sec 195, 3000 ft e of prod & separated by a failure.	3-10-46	1568	1561- 1568	Bluff Creek sd; Penn	P 21	36.6	1
Shackelford		Roeser-Pendleton, Inc's W. I. Cook 1-B-90, 1594 ft snl and 220 ft ewl E.T.Ry. sur, Sect 90, 1 mi e of prod.	11- 9-46	1328	1311- 1328	Fry sd; Penn	P 90	38	2
Shackelford		Roeser-Pendleton, Inc's T. W. Lee-Shell 1-B, c ne nw T&P Ry. 27, blk 11, 3 mi sw of Albany; betw shallow pools.	7-26-46	4874	4465- 4478	Bend li; Penn	P 7; 40% wtr	40.4	1
Shackelford		Street Investment Co's W. H. Green 1, 960 ft snl and 2040 ft wel of s½ T&P Ry. 49, blk 12, 1¾ mi n by e of prod.	12-28-46	1206	1203- 1206	Cisco sd; Penn	P 35	40	1
Taylor	Ingram	West Central Dr. Co.-J. C. Karcher et al's J. R. Ingram 1, 330 ft wel and 970 ft nsl Labor 18, Lge 146, Grimes csl, 3 mi w by n of nearest prod.	2-13-46	3110	2741- 2742	U Hope li; Penn	P 53; 99 wtr	40	3
Taylor	Kincaid	West Central Drlg. Co. et al's W. L. Kincaid 1, nw nw nw T&P Ry. 27, blk 16, 3¼ mi se Reddin fld, nearest.	9- 8-46	2710	2616- 2622	King sd; Penn	F 139; ¼"	45.6	1
Taylor	Murphree	West Central Drlg. Co. et al's C. H. Murphree 1, se se se S.P.Ry. Co. 1, blk 9, 1⅜ mi w by s of Ingram fld.	5-18-46	3062	2622- 2629	L Cook li; Penn	P 124	42	1
Taylor		Carl Hovgard et al's J. H. Campbell 1, sw sw ne T&P Ry 6, blk 18, 3⅛ mi nw of Murphree multi-pay fld.	7-30-46	3202	2490- 2503	Noodle Creek li; Penn	P 5; 5 wtr	....	1
		WEST CENTRAL TEXAS—New Oil Pays							
Brown	Cross Cut	Chas. J. Kleiner and Lee Heltzel's O. B. Fomby 1, 155 ft s and 600 ft w of nwc of John Beck Sur, 792, but in Wm. B. Smith sur 155, offsetting shallow gas.	10-12-46	3151	3136- 3151	Ellenburger dolo; Ord	P 38; 140 wtr	40	1
Hamilton	Pottsville	Homer W. Snowden O & G Co's Emil Stegemueller 1, 660 ft from se and sw lines of 149.6-ac lse, L. W. Dickerson sur 25, nw edge of gas fld. OWDD from 3065 ft & PB.	6-24-46	3460	2920- 3120	Bend li; Penn	F 5; .5 mln	....	1
Jones	Cooper	S. B. Roberts et al's O. J. Cooper 6, ne ne sw T&P Ry 29, blk 15, 1000 ft n of 2000-ft Flippen li prod.	3- 9-46	2342	2214- 2230	Gunsight li; Penn	F 237; ¼"	37	3
Jones	Cooper	S. B. Roberts et al's O. J. Cooper 7, nw nw se T&P Ry 29, blk 15, e offset to Gunsight pay disc.	4- 6-46	2340	2186- 2190	Hope li; Penn	P 231	40	1
Palo Pinto		Palo Pinto Oil & Gas Co's Wesley Roberson 1, 3770 ft snl and 660 fr ewl T&P Ry 53, blk 2, near gassers and 5 mi w of Bend oil prod., nearest.	8-13-46	3886	3877- 3886	Marble Falls sd; Penn	F 24; .8 mln; $\frac{11}{64}$"	38	1
Runnels	Huddleston	F. A. Gillespie Sons & Co's B. N. Wilke 1, 331 ft nsl and 5101 ft wel of Day Land & Cattle Co sur, 1 mi e of 3500-ft Palo Pinto li prod.	3-26-46	2500	2490- 2500	Canyon li; Penn	P 19; 25% wtr	40	1
Shackelford	Hubbard Creek	Phillips Pet. Co.-Pan Oil Co's Hickman-Nellen 1, 660 ft snl and 606 ft wel sec 16, Lunatic Asylum Lds, ne offset to Ellenburger discovery.	7- 6-46	4310	3934- 3948	Marble Falls sd; Penn	P 29; 2 wtr	42.3	1
Stephens	Hill-Marble Falls	Texas Pacific Coal & Oil Co's J. W. Hill 22, (OWWO) 440 ft ewl and 2310 ft nsl S.P. Ry 20, blk 2, offsetting Bend 3400-ft prod.	9- 3-46	4692	4030- 4040	Marble Falls sd; Penn	F 936; 112 wtr; 1"	42	1
Stephens	Manning-O'Connor	Fred M. Manning, Inc's C. J. O'Connor 1, (OWDD) 660 ft out of nec T&P Ry 52, blk 7.	5-22-46	3403	3396- 3403	Bend li; Penn	F 528; $\frac{4}{16}$"	45	16
Taylor	Dunigan	Dunigan Bros' A. W. Hunter 5, Unit 13, 330 ft snl and 990 ft wel lot 13, blk 122, W. R. Willis sur, offset to 2315-21 ft pumper.	6- 6-46	2365	2357- 2365	Cook li; Penn	P 139	44.5	2
Taylor	Murphree	West Central Dr. Co.-McElreath-Suggett & W. W. Harvey et al's C. H. Murphree 2, 1120 ft wel and 990 ft nsl S.P.Ry 1, blk 9, 1005 ft nw of 2600 ft Cook li Discovery.	7-18-46	2888	2706- 2710	U Hope li; Penn	F 306; ¼"	41	3
Taylor	Reddin	West Central Dr. Co. et al's Buster Horton 5, 330 ft snl and 660 ft ewl subdiv 1, D. B. Corley sur.	10- 5-46	2206	1845- 1849	Dothan li; Penn	F 96	40	2
		WEST CENTRAL TEXAS—New Gas Fields							
Coleman		Brannon & Murray (was H. O. Newman-B. H. Nolan's) J. R. Pearce 1, 990 ft snl and 330 ft wel of Labor 9, lge 57, Coleman CSL sur, ¾ mi ne of Starnes oil pl.	7-30-46	2127	2002- 2007	Strawn sd; Penn	3 mln	....	1
Coleman		H. T. Owen and Rhodes Drlg Co's J. D. Gorman 1, 1401 ft nsl and 467 ft ewl of nw¼ T&NO Ry 31, blk 2, 2¼ mi sw of Williams fld.	5-25-46	3728	3714- 3722	Gardner (Strawn) sd; Penn	2.5 mln	....	1
Stephens	Manning-O'Connor	Fred M. Manning, Inc's C. J. O'Connor 1, c ne ne T&P Ry 52, blk 7, 1½ mi ne of prod.	1-10-46	3348	3335- 3340	Bend li; Penn	8.84 mln; 2"	....	..
		WEST TEXAS—New Oil Fields							
Andrews	Block 12	The Texas Co's (was Atlantic Ref. Co) University 1-P, c sw nw sec 15, blk 12, 6½ mi nw Martin multi-pay fld, nearest.	8- 4-46	8404	7170- 7250	Clear Fork (Tubb) li; Perm	F 159; ½"	32.5	18
Andrews	Hunt	Placid Oil Co.-Gulf Oil Corp's M. A. Thornberry 1, c sw sw PSL 5, blk A-42, 4⅛ mi ne of Martin multi-pay fld, nearest.	9-10-46	11959	11941-11955	Ellenburger dolo; Ord	P 33; 792 wtr	40.2	1
Andrews	Nelson	Shell Oil Co's A. Nelson-Humble 1, c ne se psl 8, blk A-40, 3½ mi e of Drinkard multi-pay (Permian) fld, New Mexico.	6- 9-46	10606	10384-10585	Ellenburger dolo; Ord	F 479; 36 wtr; $\frac{4}{16}$"	43	1
Andrews	Sims	Humble Oil & Refining Co's H. O. Sims 2, c ne ne PSL 25, blk A-39, 3⅛ mi nw of Nelson fld; 2½ mi nw 7000 ft Yeso prod in New Mexico.	12-17-46	10535	10466-10531	Ellenburger dolo; Ord	F 704; ¼"	42	1

[1] "Completion horizon" indicates depth interval from which production came in discovery well. [2] Character of producing formations abbreviated thus: ch, chalk; dolo, dolomite; li, limestone; sd, sandstone; sh, shale; ser, serpentine; cgl, conglomerate. Ages of formations abbreviated thus: Plels, Pleistocene; Plio, Pliocene; Mio, Miocene; Olig, Oligocene; Eoc, Eocene; U. Cre, Upper Cretaceous; L. Cre, Lower Cretaceous; Jur, Jurassic; Tri, Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Miss, Lower Mississippian; Devo, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian. [3] Barrels of oil per day (24 hr. rate) flowing (F), pumping (P), swabbing (Sw), or bailing (B); or million cubic feet of gas daily open flow capacity; size of choke given in inches. [4] This final column shows number of producing wells at end of 1946 in the new field, new pay zone, or extension area opened by the productive exploratory well listed.

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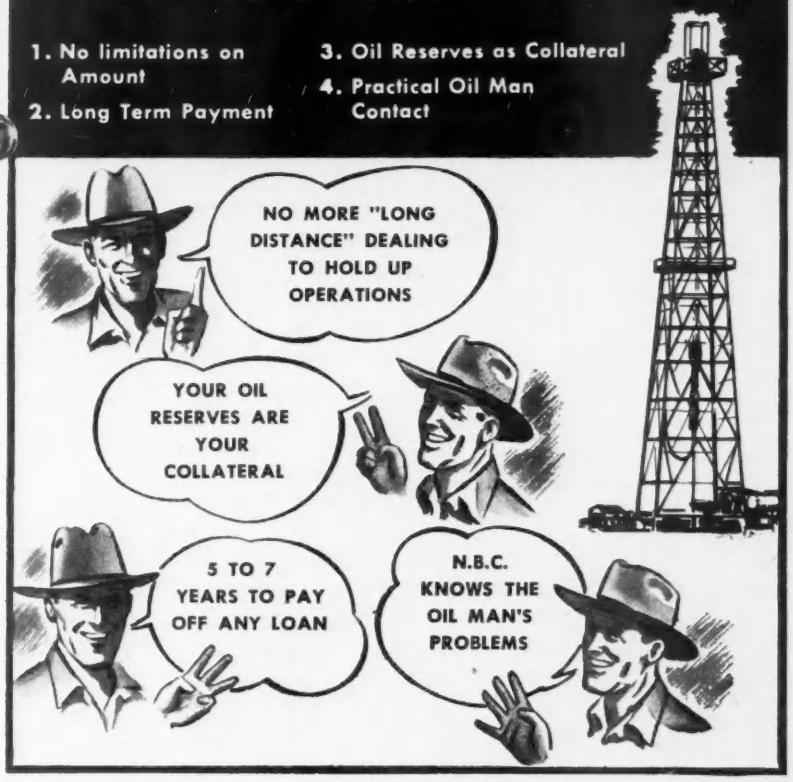
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SALIENT DATA ON PRODUCTIVE EXPLORATORY WELLS COMPLETED IN U. S. IN 1946

County	Field	COMPANY, WELL AND LOCATION	Date Completed	Total Depth (Feet)	[1]Completion Horizon (Feet)	[2]Name, Character and Age of Producing Formation	[3]Initial Production: Method and Choke	Gravity of Oil	[4]Prod. Wells Year End
		WEST TEXAS—New Oil Fields—(Continued)							
Coke	Jameson	Sun Oil Co's A. Jameson 1, c se sw H&TC Ry 253, blk 1-A, 18½ mi w of Blackwell 1-well dormant pl, nearest.	12-13-46	6245	6225- 6245	Crinoidal li; Penn	F 168; ¼"	46	1
Crockett		Moore Exploration Co.-Stanolind & Magnolia's H. M. Halff-Lee Bivins 1, 660 ft out of swc I&GN Ry 65, blk 1, 1¾ mi sw of Noelke fld, (shallow).	7-30-46	7512	2692-2710	Glorietta li; Perm	P 3½; 45% wtr	31.6	1
Dawson	Spraberry	Seaboard Oil Co's S. E. Lee 1, c se se T&P Ry 47, blk 34, T-5-N, 23 mi se of Welch fld, nearest prod.	1-24-46	3795	3730- 3795	San Andres li; Perm	P 167; 9 wtr	32.3	10
Ector	Andector	Humble O & R Co's R. B. Cowden 1-B, c ne ne T&P Ry 11, blk blk 45, T-2-N, 1⅞ mi ne of N. Goldsmith-Devonian fld disc.	10- 1-46	8600	8548- 8585	Ellenburger dolo; Ord	F 1176; 5/8"	44.2	3
Ector	Murchison	John W. Murchison et al's T. P. Land Trust-Texaco 1, c se nw T&P Ry 7, blk 45, T-2-S, 3½ mi s by w of TXL multi-pay fld, nearest.	9-10-46	8566	8510- 8566	Devonian chert; Devo	P 29; 33 wtr	40	1
Ector	TXL, S.E.	Texas Co's T. P. Land Trust-Fraser 1-D, c sw nw T&P Ry, 27, blk 45, T-1-S, 1 mi se of TXL fld and separate reservoir.	2- 7-46	10975	10790-10890	Ellenburger dolo; Ord	F 1700; ½"	41.9	1
Glasscock	Garden City	Shell Oil Co's L. C. Clark 1, c ne sw T&P Ry 5, blk 32, T-4-S, 9¼ mi se of nearest prod.	10-18-46	10970	9740- 9755	Mississippi li; Miss	F 238; 15 wtr 12/64"	56.5	1
Kent	Polar	Humble O & R Co's Lida Vick 1, c nw ne H&GN Ry 45, blk 5, 6¾ mi e by s of Justiceburg 2500-ft pl; 105 mi w by n of nearest Ellen prod.	5- 1-46	7938	7775- 7810	Ellenburger dolo; Ord	F 214; .06 mln ¼"	38.6	2
Menard	Morrow	Warren Pet. Corp-T. F. Morrow's Mrs. Ruby Russell 1, c ne ne sec 18, S. Wallick (AB&M) sur A-1478.	8-12-46	2307	2282- 2290	Canyon sd; Penn	P 21	32.5	1
Mitchell	Coleman Ranch	Norman & Roche's S. R. Coleman 1, se se nw H&YC Ry 70, blk 97, 3 mi nw of prod.	9-20-46	2770	2560- 2770	Clear Fork li; Perm	P 67	25.3	2
Pecos		Wm. Y. Penn et al's W. T. Shearer 1, 2310 ft fr nel and 330 ft fr nwl H&GN Ry 41, blk 10, 3½ mi n of Lehn fld; 3½ mi sw of Abell fld.	3-28-46	1964	1945- 1964	Yates sdy-li; Perm	F 36; 3/8"	35.5	4
Ward	Scott	Continental Oil Co's F. H. Scott 1, 330 ft out of s corner H&TC Ry 33, blk 33, 8½ mi sw of Delaware gasser, nearest prod.	11-15-46	4920	4850- 4910	Deleware sd; Perm	F 10	40	1
Ward	Sealy, S. Yates	Stanolind O & G Co's University 2-Y, c sw nw sect 13, blk 16, ¾ mi s by w of lime area, nearest.	10-23-46	2800	2700- 2800	Yates sd; Perm	F 131; 20 wtr; ¼"	28	3
Winkler	Lowe	Ralph Lowe et al's Sealy-Smith Foundation-Stanolind 1, c sw sw G&MMB&A 71, blk 1, 2⅝ mi w by s of 6100-ft Clear Fork prod.	9- 5-46	6500	5220- 5280	Clear Fork li; Perm	F 300; ½"	36	1
Winkler	Sealy-Smith	Stanolind O & G Co's Sealy-Smith 8, 660 ft ewl and 1986 ft snl G&MMB&A 48, blk A, 1¼ mi s by e of 6100-ft Clear Fork prod.	8-11-46	5215	5115- 5215	Glorietta (Holt) li; Perm	F 421; ¼"	35.4	2
		WEST TEXAS—New Oil Pays							
Andrews	Fullerton-Devonian "8500"	Mid-Continent Pet. Corp's University 8-11, 1992, ft snl and 660 ft wel sec 29, blk 13, offsetting Devonian prod.	9-19-46	8619	6070- 6120	Glorietta li; Perm	P 110	36	1
Andrews	Fullerton-Ellenburger "8500"	Mid-Continent Pet. Corp's University 3, lse 11, 660 ft snl and 1984 ft wel sec 29, blk 13, offsetting 8500 ft Devo wells.	1- 2-46	10696	10596-10630	Ellenburger dolo; Ord	F 1974; ¾"	40.1	1
Andrews	Martin-Ellenburger	Humble O & R Co's J. F. Parker 2, c nw nw psl 32, blk A-41, se offset to Basal Clear Fork prod.	3-15-46	8880	8850- 8865	Ellenburger dolo; Ord	F 1594; ½"	42.3	7
Ector	Goldsmith-Clear Fork	Stanolind et al's C. Scharbauer 3-Q, c ne sw psl 12, blk A, n edge of San Andres prod.	3-30-46	9155	6090- 6290	Clear Fork (Tubb) li; Perm	F 398; ¼"	40	4
Ector	N. Goldsmith-Devonian	Stanolind's Grisham-Hunter Corp, 1, c sw sw T&P Ry 10, blk 45, T-2-N, offsetting 4400-ft San Andres prod; old failure Deepened from 6499 ft (OWDD).	4-21-46	7956	7919- 7956	Devonian chrty li; Devo	F 445; ¼"	43	3
Ector	N. Goldsmith-Silurian	Phillips Pet. Co's R. B. Cowden-Bum 1, 667 ft snl and 1996 ft ewl T&P Ry 3, blk 45, T-1-N, ½ mi se of Devonian disc.	10-10-46	8314	8255- 8280	Silurian li; Sil	F 226; 64 wtr ½"	36.2	1
Ector	Penwell-Ellenburger	Phillips Pet. Co's et al's Eidson-Scharbauer Unit 1, 1977 ft snl and 1827 ft wel psl 25, blk B-15, ¾ mi w of n end of Penwell field.	4-20-46	9020	8920- 8950	Ellenburger dolo; Ord	F 1065; ½"	43.5	1
Ector	TXL-Clear Fork	Phillips Pet. Co's T. P. Land Trust 1-E-a, 616 ft snl and 717 ft ewl T&P Ry 39, blk 45, T-1-S, 1 mi e of s end of TXL-Devonian fld, nearest.	7- 9-46	11506	5615- 5630	Clear Fork li; Perm	F 139; ¼"	36.5	2
Ector	TXL-Silurian	Superior Oil Co's J. E. Parker 7, 2005 ft ewl and 665 fr nsl of n½ of sw T&P Ry 40, blk 45, T-1-S, most southerly prod; offsets Devonian & Ellenburger wells.	12-20-46	8535	8470- 8535	Silurian li; Sil	F 314; 1/16"	39.4	1
Ector	TXL-Wolf Camp	Shell Oil Co-Arkansas Fuel Oil Co's E. R. Thomas 1-E, 660 ft snl and 2004 ft ewl T&P Ry 32, blk 45, T-1-S, offsets Devo prod.	6-11-46	8028	7545- 7615	Wolfcamp li; Perm	P 16; 65 wtr	34.5	1
Gaines	Doss	Humble O & R Co's M. S. Doss 1, c sw sw psl 1, blk A-24, ¾ mi n by w of 7100 ft Clear Fork pumper.	4-16-46	7181	6040- 6475	Clear Fork (Tubb) li; Perm	P 187; 20% wtr	29.2	1
Howard	Howard-Glasscock	Continental-Group One Oil Corp's W. R. Settles 1-D-133, se nw nw W&NW Ry 133, blk 29, offsetting reg Permian prod.	1-30-46	10122	8924- 9080	Crinoidal li; Penn	P 31; 2 wtr	40.6	..
Winkler	Emperor-Holt	Texas Pacific Coal & Oil Co's Brown-Altman 1, lse 4, c sw sw psl 25, blk B-5, se offset to 2350-ft gasser.	3-12-46	6255	4765- 4810	Holt (Glorietta) li; Perm	F 265; 4/64"	40.1	4
Winkler	Keystone-Devonian	Stanolind Oil & Gas Co's Mack Taylor 1, tr, 2, c sw sw psl 8, blk B-2, 1 mi e of Ellen prod.	4- 6-46	10280	8040- 8135	Devonian chrty li; Devo	F 617; ¼"	32	6
		WEST TEXAS—Oil Field Extensions							
Andrews	Fullerton	Stanolind Oil & Gas Co's Lotus Oil Co 1-A, c se ne psl 16, blk A-48, 1¾ mi sw ext.	6-23-46	8593	6830- 7106	Clear Fork li; Perm	F 160; ¼"	41	3
Andrews	Fullerton	Superior Oil Co's Eva Coopwood 1, c ne ne psl 4, blk A-47, 1 mi s of Devo prod. major ext.	5- 9-46	7003	6885- 7003	Clear Fork li; Perm	F 691; ½"	42.1	6
Andrews	Martin-Ellenburger	Atlantic Ref. Co.-Phillips Pet Co's University 1-A-11, 1845 ft snl and 2033 ft wel of ne¼ sec 1, blk 11, 1⅝ mi se ext.	4-23-46	9060	8680- 8860	Ellenburger dolo; Ord	F 528; 4/16"	43.4	6
Ector	TXL-Ellen-Ellenburger	The Texas Co's T. P. Land Trust-Fraser 1-F, c nw sw T&P Ry 39, blk 45, T-1-N, 1¾ mi n ext.	6-26-46	9835	9750- 9835	Ellenburger dolo; Ord	F 1451: ½"	42.7	2
Gaines	Doss	Humble O & R Co's Helen Cunningham 1, c ne ne psl 7, blk A-24, 1⅛ mi nw ext.	8- 6-46	7135	7000- 7120	Clear Fork li; Penn	F 389; 21/64"	38	4
Hale	Irish	Stanolind Oil & Gas Co's Lee Irish 1, c ne ne HE&WT Ry 18, blk DT, 3½ mi e ext.	5- 3-46	5881	5511- 5881	Clear Fork (Basal) li; Perm	P 354	32	3
Hockley	Levelland	W. V. Ballard and J. J. Cody's Mrs. C. D. Talley-Skelly 1, 440 ft out swc Labor 17, Lge 733, State Capitol Lds, 1½ mi ne ext.	10-22-46	4845	4764- 4845	San Andres li; Perm	P 147; 10 wtr	31.8	8
Hockley	Levelland	Stanolind's Mike Veretto 1, 440 ft out of nwc Labor 7, Lge 72, Val Verde c.s.l., 2¾ mi se ext.	3-15-46	4889	4750- 4853	San Andres li; Perm	F 343; 30 wtr; 1½"	30.6	14
Hockley	Slaughter, N.W.	Alex McCutchin Drlg Co's W. T. Coble-Magnolia 1, 660 ft out swc w½ Labor 15, Lge 66, Hardeman csl sur, 1½ mi ne ext.	6-14-46	4830	4798- 4830	San Andres li; Perm	P 85	30	5
Mitchell	Westbrook	Hickok & Reynolds, Inc's F. A. Langley 1, nw nw se T&P Ry 25, blk 29, T-1-N, 2 mi w ext.	4-30-46	3151	2259- 3151	Clear Fork li; Perm	P 56; 8 wtr	27.5	2

[1] "Completion horizon" indicates depth interval from which production came in discovery well. [2] Character of producing formations abbreviated thus: ch, chalk; dolo, dolomite; li, limestone; sd, sandstone; sh, shale; ser, serpentine; cgl, conglomerate. Ages of formations abbreviated thus: Plels, Pleistocene; Plio, Pliocene; Mio, Miocene; Olig, Oligocene; Eoc, Eocene; U. Cre, Upper Cretaceous; L. Cre, Lower Cretaceous; Jur, Jurassic; Tri, Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Miss, Lower Mississippian; Devo, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian. [3] Barrels of oil per day (24 hr. rate) flowing (F), pumping (P), swabbing (Sw), or bailing (B); or million cubic feet of gas daily open flow capacity; size of choke given in inches. [4] This final column shows number of producing wells at end of 1946 in the new field, new pay zone, or extension area opened by the productive exploratory well listed.

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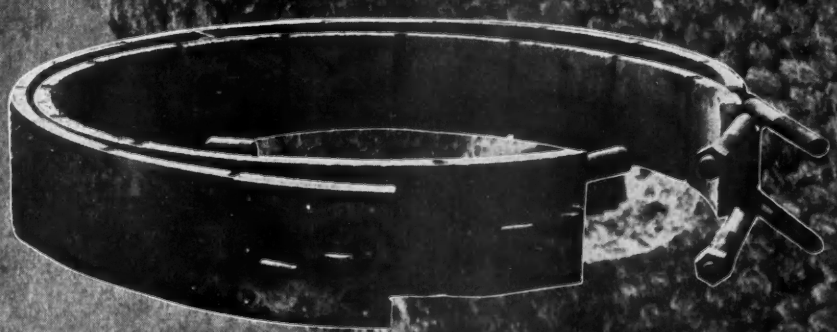

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SALIENT DATA ON PRODUCTIVE EXPLORATORY WELLS COMPLETED IN U. S. IN 1946

County	Field	COMPANY, WELL AND LOCATION	Date Completed	Total Depth (Feet)	[1]Completion Horizon (Feet)	[2]Name, Character and Age of Producing Formation	[3]Initial Production: Method and Choke	Gravity of Oil	[4]Prod. Wells Year End
		WEST TEXAS—Oil Field Extensions—(Continued)							
Upton	Crockett	Gilcrease Prod Co's University-Superior 1, 330 ft nsl and 2343 ft ewl sec 19, blk 14, 1⅜ mi n ext.	9-10-46	1535	1428- 1512	Grayburg li; Perm	P 6	33	2
Ward	Ward, S	Roy D. Golston et al's W. L. Moody 1, c w¼ of e¼ H&TC Ry 32, blk 34, 1 mi n by w ext.	9-28-46	2725	2487- 2550	Yates sdy li; Perm	F 30; 3/32"	31	1
		WEST TEXAS—New Gas Fields							
Crane		Humble O & R Co's N. N. Tucker 1, 660 ft fr se and 4620 ft fr ne li of H&TC Ry 23, blk 1, 1½ mi n by w of McKee pl; 1½ mi n by e of Abell fld.	1-15-46	6344	5700- 5720	Waddell sd; Ord	F 6.3 mln; 5/16"		1
Pecos	West Owego	Bryce McCandless et al's Atlantic-Cordove-Gulf 1-115, se ne se H&GN Ry 115, blk 11, 1½ mi w by n of 2970 ft gasser, nearest; (OWDD) from 1643 ft.	7-18-46	2260	2250- 2260	Clear Fork li; Perm	4.5 mln; 2"		1
Pecos		Byrd & Frost, Inc's J. S. Jackson-Sun 1, ne ne sw H&GN Ry 46, blk 11, 1 mi s by w of Wentz pl.	1-18-46	1361	1220- 1308	Yates sd; Perm	2.2 mln		1
Sutton		Shell Oil Co's Duke Wilson 1, c nw se TW&NG Ry 38, blk B14 20 mi s by w of wildcat gasser, nearest prod.	5-27-46	6170	4194- 4215 4220- 4245	Strawn li; Penn	9.3 mln; 2"		1
		WEST TEXAS—New Gas Pay							
Andrews	Block 12	The Texas Co's University 2-T, c ne se sect 22, blk 12, se edge Clear Fork prod.	11- 4-46	2950	2799- 2950	Yates sd; Perm	2.7 mln; 2"		1
		UPPER TEXAS COAST—New Oil Fields							
Chambers	Mayes, S	Humble's Lula Wallis et al 1, 6500 se prod on 200-ac lse, Samuel Mather sur, blk 13, tr 1.	3- 9-46	10010	9194- 9200	Frio sd; Olig	F 185; 3/64"	36.6	3
Matagorda	Blessing, E	Amerada et al's Ike Laughlin 1, 660 fr wl 330 fr n&sl 39.54-ac lse, and lot 5, John Holmes sur, 3 mi se Blessing.	7-26-46	11513	8832- 8846	Frio sd; Olig	F 132; 3/64"	47.2	1
Matagorda	Midfields	Sun's Strnadel 2, 1320 fr s&el 325-ac lse, I&GN sur 7, 933 nw Strnadel 1.	1-15-46	9477	9127- 9137	Frio sd; Olig	F 229; ⅛"	38.1	6
Matagorda	Tidehaven	Magnolia's Live Oak Farms 1, 660 fr s&wl lot 9, 2000 w 1950 n of sec J. W. E. Wallace sur, 190.3-ac lse, 1 mi w El Maton, 5 mi e Midfields fld.	8- 4-46	11157	8450- 8456	Frio sd; Olig	F 160; ⅛"	41	2
Matagorda		Johnston & Johnston's F. S. Surkamp 1, 330 fr el, 485 fr sl lot 10, Josiah Tilley Lge, blk 2, T. J. Poole pstr, 47.4-ac lse.	11-22-46	10005	8530- 8535	Frio sd; Olig	F 38; 1/64"	43.5	1
Orange	Port Neches, N	Hinkle Drlg. Co's G. M. Adcock 1, start nwc Adcock 399-ac tr go 4044 sely alg wly/1 80-ac lse th 380 nely at ra to lcn, J. Stephenson sur, 8100 nw Port Neches prod.	9-15-46	8954	8774- 8778	Hackberry sd; Olig	F 300; 3/32"	37.4	1
Wharton	Hutchins	Lake View Oil Co's J. E. J. Johnson 1, 396 fr nel, 731 fr sel 150.66 ac lse, I&GN sur, 15&22, 1 mi s Lake View gas fld.	7-15-46	5789	4515- 4526	Sd; Oligocene	F 126; ⅛"	24.3	2
		UPPER TEXAS COAST—New Oil Pays							
Brazoria	Blue Lake	McCarthy O & G Corp's Turnbull et al 1, 675 fr nl 330 fr el, 160 ac lse, Ger. Robinson Lge.	4- 9-46	9367	8510- 8527	Frio sd; Olig	F 233; 3/64"	34.3	3
Brazoria	Stratton Ridge	E. Cockrell's Seaburn Est. Heirs 5, 815 fr wl 520 fr nl 2757.22 ac lse, J. E. Groce 5-Lge gr.	6-22-46	4640	4467- 4586		F 148; 3/32"	29.6	2
Brazoria	W. Columbia	Hogg Oil Co's Mike Hogg et al 10-A, 1830 fr nl 150 fr el 248.59 ac lse, Martin Varner sur, 1750 ne Well 3-A at W. Columbia.	9- 2-46	6257	6106- 6122	Frio sd; Olig	F 470; ¼"	33.1	2
Chambers	Cedar Point	Standard of Tex.-Salt Dome Oil Corp's State-Galveston Bay 33-M, 2410 fr nw&nel Galveston Bay sect 118, 640 ac lse.	8-20-46	3880	3864- 3876	Sd; Miocene	F 121; 5/32"	27.6	2
Chambers	Cedar Point	Standard of Tex.'s State-Galveston Bay 3-M, 2261 fr nel 2261 fr nwl sect 118, 640-ac lse.	5-22-46	3900	3660- 3665	Miocene sd; Mio	F 116; 5/32"	26.7	1
Fort Bend	Needville	W. L. Goldston's E. C. Farmer 5, 1130 fr sw&nwl 250-ac tr, Robert Hodge sur.	3- 1-46	6700	6660- 6690	Frio sd; Olig	F 146; ⅛"	28.2	1
Galveston	Caplen	Roxoil Drlg. Co's R. P. Smith 1, 10 nw of sel 330 sw of nel 75-ac tr, Minor Knowlton sur.	8-17-46	7808	4031- 4035	Sd; Miocene	F 61; 3/32"	26	1
Galveston	High Island	J. W. Mecom's E. Ker Cade et al 6-A, 990 fr el 320 fr sl W. M. Hudson sur, 430 ac lse.	12-24-46	7359	7141- 7159	Frio sd; Olig	F 371; 5/16"	34.1	1
Hardin	Saratoga, E. Flk	L. M. Josey et al's Caswell Tr. Co., 2, 3000 fr prod, 915 fr n&wl 1255 fr el 147-ac lse, BBB&C sur.	4- 9-45	5951	5849- 5865	Yegua sd; Eoc	F 128; ⅛"	39.8	1
Hardin	Saratoga, E. Flk	L. M. Josey et al's Caswell Tr. 4, 533.5 fr sl 147-ac tr, BBB&C sur 72, 50 w of Caswell 2, e flk discovery well.	10-22-46	6365	6027- 6097	Yegua sd; Eoc	F 215; 5/32"	39.1	1
Hardin	Saratoga, N.E., Flk	L. M. Josey et al's Caswell Tr. 3, 330 fr nl 587.5 n&e well 2, 147 ac tr, BBB&C sur 72.	8- 3-46	5970	5690- 5768	Yegua sd; Eoc	F 163; 3/64"	39.9	1
Hardin	Silsbee, W	American Republic Corp's Ellery-Fee 1, 644.3 fr wl 2745.8 fr nl Jos. Ellery Lge.	4- 8-46	8143	7688- 7722	Yegua sd; Eoc	F 84; 2% wtr ⅛"	41	2
Hardin	Sour Lake, S.W. Flk	Texas Co's Fee 326, 330 fr sl 990 fr wly/wl 815.35-ac lse, Stephen Jackson Lge, 3196.9 sw nearest prod.	8- 1-46	6779	5197- 5210	Yegua sd; Eoc	F 243; 11/64"	24.6	1
Jefferson	Stowell	McCarthy O & G Corp's Tyrrell Tr. 3, 660 fr el 330 fr sl n½ sect 83, 1030.3-ac lse, W. C. Dunshie sur, ¾ mi e of dry hole 1.	2-14-46	10789	10160-10169	Hackberry sd; Olig	F 217; 11/64"	39.6	1
Liberty	Hull	American Republic Corp's Dolbear 176, 2160 fr nl 1200 fr el 800-ac lse, J. Devore Lge.	12-14-46	6950	5084- 5104	Middle Yegua sd; Eoc	F 139; 40% wtr; 11/64"	41.8	1
Liberty	Hull E. Flk	American Republic Corp's Dolbear 175, 1280 fr el 2610 fr nl 800-ac tr, and J. Devore Lge.	10- 5-46	5700	4862- 4900	Yegua sd; Eoc	F 128; ⅛"	44.3	1
Liberty	Liberty, S	F. J. Bashara's H. L. McGuire 2, 10.44-ac lse, M. G. White sur, 201 sw well 1.	3-16-46	3796	3299- 3310	U Frio sd; Olig	F 198; 1.4% wtr; ⅛"	22.4	2
Liberty	Liberty, S	Sun's Shade Fee 12, 2297 fr el 50 fr nl 50-ac lse David Minchey Lge, 100 e of well 1, abnd test.	5-10-46	4900	4585- 4615	Cook Mtn. sd; Eoc	F 103; ⅛"	37.2	1
Liberty	McCoy	Ohio Oil Co's B. E. Quinn 2-A, 1980 fr s&el 1071-ac lse, Daniel Donahoe Lge, 5975 se 1-A dry hole.	4-19-46	9800	9125- 9135	Quinn (Wilcox) sd; Eoc	F 62; ¼"	32.4	1
Matagorda	Lucky	Stanolind's John E. Thompson 1, 1300 w alg sl, 660 n at ra, 588.48-ac tr (OWDD).	1-30-46	10248	10188-10205	Frio sd; Olig	F 52; 3.8 mln; 7/32"	38.6	1
Matagorda	Sugar Valley	Skelly's Gregg Lawrence 1, 467 fr nw&swl 227.3-ac tr, P. Burnett-A. S. Sojourner sur.	4-13-46	10000	8972- 8997	Frio sd; Olig	F 168; 5/16"	32	18
Matagorda	Sugar Valley	Skelly's C. C. Talcott 1, 330 fr nw & nel 38.5-ac tr, P. Burnett and A. S. Sojourner sur.	6-11-46	9508	8853- 8863	Frio sd; Olig	F 128; 5/32"	32.9	2
Matagorda	Sugar Valley	Superior of Calif's W. J. Culbertson 1, start n cor sect 84 go 330 ne alg sel sect 81, 330 nw at ra to lcn, 253-ac tr, P. Burnett-A. S. Sojourner sur.	2- 6-46	10662	8273- 8290	Frio sd; Olig	F 256; 2.6 mln; ¼"	43.8	1
Matagorda	Sugar Valley	Superior-John Blaffer's Sadie E. Thomasson 1, 166-ac lse, P. Burnett & A. Sojourner sur.	3-21-46	10100	9083- 9097 8761- 8786	"T" Frio sd; Olig "C" Frio sd; Olig	F 423; 3/16" F 71; 3.7 mln	35.4 55.7	5
Wharton	Daboval	Floyd L. Karsten's Gus Lilie 1, s½ se¼ ETRR sur 73.	3- 7-46	7404	7126- 7150 7226- 7240	"T" sd; Olig "C" sd; Olig	F 54; ⅛" F 1.7 mln; ⅛"	42	1 ....
Wharton	Lane City	H. W. Snowden's H. C. Cockburn 5-A, 537-ac tr, S. Castleman sur, lot 5, blk 105.	4- 5-46	5503	5345- 5390	U Frio sd; Olig	F 81; ⅛"	26.3	4

[1] "Completion horizon" indicates depth interval from which production came in discovery well. [2] Character of producing formations abbreviated thus: ch, chalk; dolo, dolomite; li, limestone; sd, sandstone; sh, shale; ser, serpentine; cgl, conglomerate. Ages of formations abbreviated thus: Plels, Pleistocene; Plio, Pliocene; Mio, Miocene; Olig, Oligocene; Eoc, Eocene; U. Cre, Upper Cretaceous; L. Cre, Lower Cretaceous; Jur, Jurassic; Tri, Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Miss, Lower Mississippian; Devo, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian. [3] Barrels of oil per day (24 hr. rate) flowing (F), pumping (P), swabbing (Sw), or bailing (B); or million cubic feet of gas daily open flow capacity; size of choke given in inches. [4] This final column shows number of producing wells at end of 1946 in the new field, new pay zone, or extension area opened by the productive exploratory well listed.

SALIENT DATA ON PRODUCTIVE EXPLORATORY WELLS COMPLETED IN U. S. IN 1946

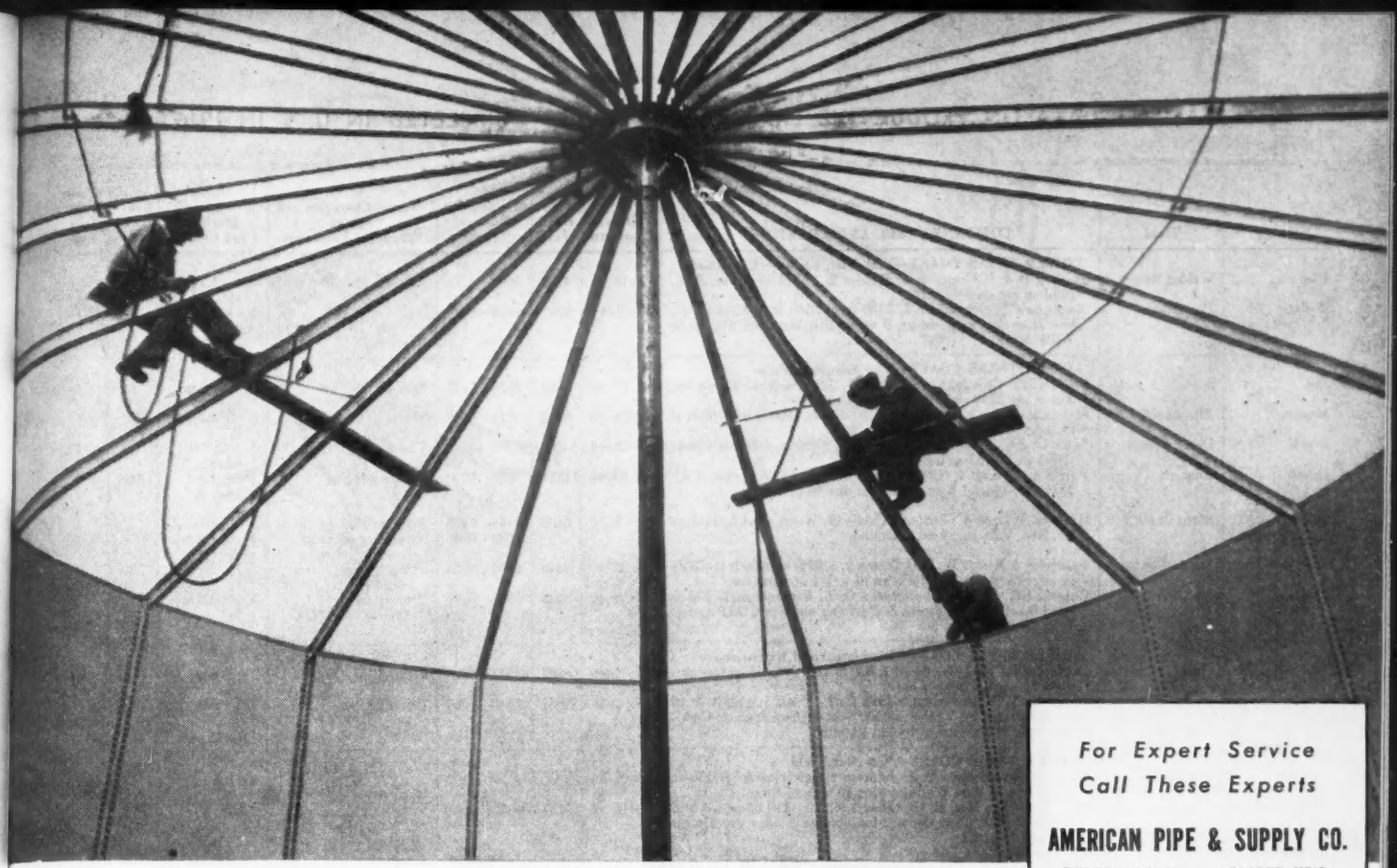
County	Field	COMPANY, WELL AND LOCATION	Date Completed	Total Depth (Feet)	[1]Completion Horizon (Feet)	[2]Name, Character and Age of Producing Formation	[3]Initial Production: Method and Choke	Gravity of Oil	[4]Prod. Wells Year End
		UPPER TEXAS COAST—Oil Field Extensions							
Brazoria	Chocolate Bayou	Pan American Prod. Co's Callihan 1, 330 fr nel 418 fr nwl, lot 2 Callihan sbdn of tr 9 on 320-ac lse, Angier-Hall-Bradley sur, 1½ mi se Liverpool, ¾ mi sw ext.	8-24-46	12204	8757- 8762	Frio sd; Olig	F 331; 4% wtr; 4/64"	40.3	..
Colorado	Sheridan	Grubb & Hawkins-Lone Star Prod Co's Ruth E. Powers 1, 574-ac lse, Mrs. S. W. Garnett sur, e ext.	3-23-46	10456	10130-10362	"L" Wilcox sd; Eoc	F 145; 2.3 mln; ¼"	59.4	..
					9318- 9372	"Q" Wilcox sd; Eoc	F 132; 4.3 mln; ¼"	49.3	
Fort Bend	Thompson, N.	T. S. Loffland's Annie E. Williams et al 1, 330 n of Brazos River, 335 e of el 20-ac lse on ne flk, T. Barnett Lge.	1-21-46	8154	7928- 7960	Vicksburg sd; Olig	F 113; ½"	36.1	..
Liberty	Hull, S.E. Flk.	General Crude's Phoenix Dev. Co. 1, start sly cor 284-ac lse go 2590 nly alg wl th 1347 e at ra to lcn, 1125 se Gulf's Phoenix 1-A, 9669 ft failure.	7-27-46	9016	7850- 7858	Yegua sd; Eoc	F 50; 4/32"	32.5	..
San Jacinto	Mercy	Fred M. Manning's Central Coke & Coal Co. 1, c 40-ac unit on 1533.4-ac lse, J. Ferguson sur, 2½ mi sw ext.	2-24-46	11001	8310- 8350	Wilcox sd; Eoc	F 14; 11/64"	50.2	..
		UPPER TEXAS COAST—New Distillate Fields							
Chambers		Standard of Tex's State-Galveston Bay 1, Mineral lse 27129, 660 fr swl 1320 fr sel sect 201 Galveston Bay, on 640-ac lse, 1 mi ne Red Fish Reef, sw Smith Point prod.	10-31-46	11390	8752- 8756	Frio sd; Olig	F 288; ¼"	53.6	1
Liberty	McCoy	Ohio Oil Co's Kirby Lbr. Corp. 1, 61-ac tr. 5, Jas McCoy Lge.	3- 5-46	10285	9107- 9135	Wilcox sd; Eoc	F 52; 18% w 1.2 mln; 5/8"	54.1	5
Madison		West Prod Co.-Noranda Oil Co's H. M. Boring 1, 467 out of nec 100-ac lse, Amy Boatright sur, 7½ mi sw Madisonville.	10- 7-46	12356	9613- 9630	Edwards li; L Cre	F 39; 1 mln; ¼"	55.8	1
Trinity	Glendale	Magnolia's Bolton 2, 5000-ac lse, Henry Bond Lge, c lot 80, s sw Navarro's Bolton 1.	3- 8-46	12505	10500-10535	Edwards li; L Cre	F 24; .5 mln; 4/32"	51	..
		UPPER TEXAS COAST—New Distillate Pays							
Brazoria	Blue Lake	McCarthy O & G Corp's Holland et al 1, 360 fr el 1245 s of sly/nl 275-ac lse, John Bradley Lge, 4000 e of oil prod, 9000 sw gas prod.	7-17-46	11397	10980-11014	Frio sd; Olig	F 50; 135 mln; ¼"	55	1
Chambers	Double Bayou	Humble's Double Bayou Unit 2-A, 660 fr sl 331 fr wl R. O. W. McManus sur, 160-ac lse.	9-21-46	10347	9000- 9007	Frio sd; Olig	F 7; .24 mln; 7/8"	50.1	1
Chambers	Mayes, S.	Humble's Annie Frankland et al 1, 467 fr wl 52-ac tr out of 561-ac lse, and S. Mather sur, blk 13.	4-28-46	9900	9103- 9115	Frio sd; Olig	F 32; ¼"	54.9	1
Chambers	Red Fish Reef	Humble's State-Galveston Bay 35-A, 660 fr se & swl sect 225, State Tr 28499, 640-ac lse.	5- 6-46	11242	11038-11067	Frio sd; Olig	F 76; 1.5 mln; ¼"	51.4	1
Colorado	Altair	Superior's Mrs. Myra S. Pryor 4-A, begin nwc P. O'Daugherty sur, go 1390 s alg swl th 1565 sw at ra to lcn, 800-ac lse, BBB&C sur.	11- 5-46	10366	10174-10192	Wilcox sd; Eoc	F 117; 4.6 mln; ¼"	50	1
Harris	Tomball	Humble's Ed. F. Milo et al 10, 213.27-ac lse, C. N. Pillot sur.	3-27-46	15542	6146- 6163	Cockfield sd; Eoc	F 38; ¼"	51.8	1
Jefferson	Lovell Lake	Humble's Jefferson Ld Co 40, 478 ne of n bnk Bayou Din, 797 nw nw bnk Double Point Bayou, 2313.9-ac lse, C. Hillebrandt sur.	7-31-46	9855	9030- 9040	Frio sd; Olig	137; 8.3 mln; 4/32"	47.1	1
Jefferson	Stowell	McCarthy O & G Corp's W. C. Tyrrell Trust 4, 700 fr sl 1760 fr el n½ W. D. Dunshie sect 82, 1040.3-ac lse.	9-13-46	10563	10238-10312	Hackberry sd; Olig	No gge; 4.6 mln; ¼"	52	1
Matagorda	Blessing	American Liberty's Dela Braden 1, (OWDD) 708.5 fr nl 768.5 fr wl lot 36, 100-ac lse.	4- -46	10149	8422- 8475	Frio sd; Olig	F 200; 7 mln; ¼"	51	1
Matagorda	Midfields	Sun's R. B. Trull 1, 660 fr n&wl 160-ac tr, I&GN sur, blk 6, 2087 e ne Strnadel 2 discovery.	3-25-46	9202	9088- 9100	Frio sd; Olig	F 308; 3.8 mln; ⅛"	57.8	1
Matagorda	Sugar Valley	Skelly's B. N. Cooke 1, 417 fr swl 332 fr nwl 55-ac lse, P. Burnett-A. S. Sojourner sur.	4-25-46	8400	7674- 7685	Frio sd; Olig	F 8; 1.1 mln; ⅛"	52	1
Matagorda	Tidehaven	Ralph A. Jognston's Live Oak Farms 1, 545 fr nl 660 fr el, 70-ac lse, Josiah Tilley Lge.	9-10-46	9002	8756- 8772	Frio sd; Olig.	F 184; 3.7 mln	52	1
Orange	Orange	W. V. Bowles' M. Granger Heirs et al 1, 125 fr nl 75 fr el 50-ac lse.	12- 6-46	5317	4725- 4735	Sd; Oligocene	F 6; 1 mln; ⅛"	60	1
Tyler	Hyatt, S.	Atlantic's J. R. Dempsey 1, 467 fr wl 660 fr sl 22,51-ac lse, 660 fr sl 330 fr wl L. A. Beard sur, 3100 w sw of disc well.	10-25-46	10326	10238-10300	Wilcox sd; Eoc	F 84; 4.3 mln; ¼"	51.4	1
Wharton	El Campo	Seaboard of Dela.'s Gertrude Peterson 1, 467 fr s&el sect 49 ETRR sur, 160-ac lse, 2 mi ne prod.	4-11-46	7595	6921- 6927	Frio sd; Olig	F 14; 36 mln; ⅛"	50	1
Wharton	Withers	Texas Co's Pierce Est. 122-C, 4299 fr sel 467 fr swl 4488-ac "C" lse, John Caldwell sur.	11- 3-46	8466	6650- 6670	Frio sd; Olig	F 13; 3.7 mln; 1/16"	53	1
		UPPER TEXAS COAST—Distillate Field Extension							
Brazoria	Chocolate Bayou	Phillips' M. V. Armstrong 1, 660 fr se&nel 125.08-ac lse, Hooper and Wade sur, 15, 1 mi n ext.	5-23-46	11653	10644-10659	Frio sd; Olig	F 72; 4/16"	50	..
		UPPER TEXAS COAST—New Gas Field							
Wharton		Floyd L. Karsten's J. L. Reitz 1, 467 fr s&wl 80-ac lse, ETRR sur, 1 mi nw El Campo, S. fld, 1¾ mi ne Daboval fld.	12- 3-46	7200	6936- 6952	Frio sd; Olig	F 3.6 mln; ¼"	....	1
		UPPER TEXAS COAST—New Gas Pays							
Brazoria	Blue Lake	McCarthy O & G Corp's Frank K. Stevens et al 2, 208-ac lse, Geo. Robinson sur, 1227 e of well 1.	3-11-46	10600	9028- 9040	"T" sd; Olig.	F 4.5 mln; ¼"	....	2
Harris	Aldine	F. M. Corzelius' O. P. Hairgrove 1, 466 fr n&wl 160-ac tr, E. Farias sur, 2000 s sw Browland 1, 5750 ne Phoenix Dairy 1 gassers.	4- 1-46	7542	7527- 7548	Yegua sd; Eoc	F 3.7 mln; ¼"	....	1
			4- 1-46	7542	7527- 7548	Yegua sd; Eoc	F 3.7 mln; ¼"	....	1
Wharton	Lakeview (Hutchins)	W. A. Clark, Jr.'s Anna Tobola Est. 1, 660 fr nely & sely/1, 80-ac lse, sect 15 I&GN sur, 4000 w nw Lakeview oil prod.	9-18-46	5014	4796- 4806	Oligocene	No gge	....	1
Wharton	Lane City	General Crude's Security Bank & Trust Co. 8, 330 se at ra fr e bank Colorado River, 300-ac lse, S. Castleman sur, 5, blk 103.	5- 6-46	5503	4154- 4156	Miocene	No gge	....	1
		UPPER TEXAS COAST—Gas Field Extensions							
Brazoria	Angleton	Humble's Minnie W. Mettler et al 1-B, 1980 s of nl 990 e of wl lot 14, M. T. Cox et al sdbn Cloud sur, 1000-ac lse; 1 mi n ext.	4- 1-46	11597	10416-10440	Frio sd; Olig	F 1 mln; ¼"	....	..
Brazoria	Pledger	Humble's Pledger Gas Unit 2-1, 660 fr nel lot 45, 660 fr sel lot 46, Pierce sdbn, 360-ac unit, D. Shipman & I. N. Charles sur, 790 w of Humble's Carter 1, n ext.	8-30-46	6893	6830- 6842	Frio sd; Olig	No gge	....	.
		LOWER TEXAS COAST—New Oil Fields							
Bee		S. Donzis' Holzmark 1, 1380 at ra fr nwl 1435 at ra fr swl J. A. York sur, 330 fr nwl 1841 fr nely/nel 282.52-ac lse, 1 mi se Foley fld, ¾ mi s w Holzmark oil disc, n Holzmark gas pr. d.	12- 1-46	3540	3490- 3521	Hockley (Jackson) sd; Eoc	P 3	....	1
Brooks	Gyp Hill	Sun's Mary M. Lasater 4-B, 470 fr el 1780 fr sl GB&CNG sur, 331, 991 n ne Lasater 3-B dry hole.	4-25-46	4075	4070- 4075	Frio sd; Olig	F 41; ¼"	43.7	1
Goliad	Weesatche, S.	Continental's Gena Heard et al 1, (OWWO) 400 fr el & 3000 fr sl Robt. Walker sur, A-296, 10 mi n Goliad.	7- 1-46	9002	5050- 5068	Yegua sd; Eoc	F 33; 9.7 mln	62	1
Jackson		Blanco Oil Co.-Al Buchanan's John Lind 1, 390 fr nl 1870 fr el J. Heard sur, 125-ac lse, 1 mi se Stewart fld, 1 mi sw Ganado fld.	12-22-46	7415	7059- 7060	Frio sd; Olig	F 45; 50% wtr; 12/32"	....	1
Jim Wells	Magnolia City, W.	R. E. Fair et al's Raynolds & Richardson 1, 330 fr s&el lot 19, Seefeld Farm Lots sbdn, W. N, Staples sur 210, 1 mi w Magnolia City fld, 1000-ac farmout.	5-13-46	5883	5402- 5414	Frio sd; Olig	F 76; 11/64"	41	4

[1] "Completion horizon" indicates depth interval from which production came in discovery well. [2] Character of producing formations abbreviated thus: ch, chalk; dolo, dolomite; li, limestone; sd, sandstone; sh, shale; ser, serpentine; cgl, conglomerate. Ages of formations abbreviated thus: Pleis, Pleistocene; Plio, Pliocene; Mio, Miocene; Olig, Oligocene; Eoc, Eocene; U. Cre, Upper Cretaceous; L. Cre, Lower Cretaceous; Jur, Jurassic; Tri, Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Lower Mississippian; Devo, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian. [3] Barrels of oil per day (24 hr. rate) flowing (F), pumping (P), swabbing (Sw), or bailing (B); or million cubic feet of gas daily open flow capacity; size of choke given in inches. [4] This final column shows number of producing wells at end of 1946 in the new field, new pay zone, or extension area opened by the productive exploratory well listed.

SALIENT DATA ON PRODUCTIVE EXPLORATORY WELLS COMPLETED IN U. S. IN 1946

County	Field	COMPANY, WELL AND LOCATION	Date Completed	Total Depth (Feet)	[1]Completion Horizon (Feet)	[2]Name, Character and Age of Producing Formation	[3]Initial Production: Method and Choke	Gravity of Oil	[4]Prod. Wells Year End
		LOWER TEXAS COAST—New Oil Pays—(Continued)							
Live Oak	Lagarto	Roxie Wright et al's S. F. Beall Est. 1, 660 fr nwl 2640 fr nel 900-ac lse, 660 fr nwl 13,000 fr swl of W. J. Cannon sur, 3 mi s sw Mt. Lucas fld, 3½ mi e ne Hinnant fld.	11-16-46	6658	5580- 5585		F 50; 5/32"	43	1
Live Oak	Schwartz	Henshaw Bros.-E. H. Smith's H. N. Schwartz et al 1, 330 fr se& swl 200-ac lse, John McMullen sur, 2, n i ne Lucas gas fld.	11-10-46	4495	4011- 4019		F 46; 1/4"	23.5	1
Nueces		Rand Morgan's Fee A-1, 849 fr sl 2098 fr el 411-ac lse, sect 5 Richard King Farm lots, 1 mi ne Richard King fld.	12-15-46	5848	5604- 5609	Frio sd; Olig	F 41.4; 3/32"		1
San Patricio	Round Lake	Hewit & Dougherty-Lonnie Glasscock's W. A. Jennings 1, 660 fr n&wl blk 3, C. C. Smith sbdn and 87.8-ac lse, John McMullen sur, 1¼ mi e se Gallagher fld.	11-19-46	5869	5440- 5456		F 32; 1/4"	38.7	1
San Patricio	Taft, E	Claud B. Hamill's Ruth P. Sweatt et vir 1, 330 fr n&el lot 4, sect 7, 2rd sbdn Taft Farm Lds, 440-ac lse, 2 mi e se Taft fld.	9- 4-46	5642	5602- 5607	Frio sd; Olig	F 34; 58% wtr; 1/8"	21.2	2
		LOWER TEXAS COAST—New Oil Pays							
Brooks	La Gloria	Argo Oil Corp's Birdie B. Riley 3-A, 360 fr el 1320 fr sl 99.8-ac lse, lot 13, blk 8.	11- 4-46	7406	6961- 6971	Frio sd; Olig	F 305; 1/8"	43.4	1
Brooks	Pita	Humble's D. J. Sullivan 6-B, 3350 n of sl of 8680-ac lse, San Antonio de Encinal gr.	12-30-46	8369	7766- 7780	Frio sd; Olig	F 244; 1/8"	38.3	1
DeWitt	Yoakum	Pure's A. F. Karl 1, 78.33-ac lse, John May sur, ½ mi s Rice 1, disc well, gas-cond.	3-12-46	11334	8660- 8670	Wilcox sd; Eoc	F 38; 52% wtr; 1/4"	37.6	1
Goliad	Cabeza Creek	Continental's J. E. Pettus et al 11, 6630 se alg nel fr n cor Sebastian o Vela sur th 660 at ra to lcn in 3696-ac lse.	11-22-46	7845	4528- 4533	Pettus sd; Eoc	F 191; 11/64"	46.1	1
Jim Wells	Tijerina-Canales	Texas Co's H. C. de Tijerina 37, 2338 fr nl 3000-ac lse, 6182½ w of el sur 270, in A. Canales sur 360.	11-10-46	7600	6990- 6995	Frio sd; Olig	F 54; 5/32"	42.5	1
Jim Wells	Tijerina-Canales	Texas Co's H. C. de Tijerina 38, 7245 w of el sur 270, 1787 s of nl 3000-ac lse, A. Canales sur 360.	12-27-46	7472	5990- 6000	Frio sd; Olig	F 73; 2% wtr; wtr; 3/32"	51.9	1
Karnes	Fall City	Southern Minerals Corp's L. A. Faires 4, 255-24-ac lse, Louis Manchaca gr, 956 sw Faires 3.	3- 2-46	5002	4887- 4898	Gov't Wells sd; Eoc	F 20; 3/64"	48.2	5
Kleberg	Borregas	Humble's King Ranch-Borregas 2, 7815 fr sl (at ra) 30, 781 w of el (at ra) of 40,591-ac lse, Santa Gertrudis gr, 8 mi sw Kingsville.	10-31-46	8500	6364- 6380	Frio sd; Olig	F 138; 1/8"	42	1
Nueces	Agua Dulce	L. M. Lockhart's F. & G. Prochaska 1, 660 fr s&el 460-ac lse, V. L. de Herrera gr, 4700 ne Lockhart's Herrman 2, 3600 n ne Herrman 3.	11-24-46	6858	5110- 5124	Frio sd; Olig	F 146; 5/32"	36	5
Nueces	Minnie Bock, N.	Atlantic's Lee M. Dugger 1, 1787 fr el 467 fr nl 320-ac lse and sect 53, G. H. Paul sbdn Driscoll Rch, J. L. Herrera gr.	12-19-46	8510	6138- 6143		F 120; 5/128"	39.6	1
Nueces	Minnie Bock, N.	Atlantic's Jas H. Ewing 2, 219-ac lse, M. Lopez de Herrera gr, 1629 se Ewing 1 gas disc well.	3- 2-46	8495	6218- 6240	Frio sd; Mio	F 188; 5/32"	37.5	1
Nueces	Minnie Bock, N.	Atlantic's Geo. Renken 1, 660 fr el 1980 fr sl sect 45, Geo. H. Paul sbdn Robert Driscoll Rch, on 120-ac lse, M. L. de Herrera gr.	7-24-46	9431	7870- 7881	Frio sd; Olig	F 185; 1/8" & 3/64"	29.2	1
Nueces	Minnie Bock, N.	Louis Crouch's Walter L. Parr 2, 1467 fr nl 467 fr wl sect 36, Geo. H. Paul's sbdn of Driscoll Rch, Lopez de Herrera gr, 239.7-ac lse.	8-17-46	6803	5990- 6004	Frio sd; Olig	F 107; 6½% wtr; 7/64"	36.2	1
Nueces	Saxet	Richardson Pet. Co's L. G. Talbert 1, 467 s of nl 467 w of el 314.5-acs Russell Farms Trs.	2-11-46	7495	6635- 6645	Frio sd; Mio	F 164; 7/64"	38.6	7
Nueces	White Pt., E.	W. R. R. Oil Co's State-Nueces Bay (973) 5, (OWWO) 330 fr swl 161.6-ac lse, state tr 973, Nueces Bay.	9-18-46	5863	5808- 5819	Frio sd; Olig	F 119; 1/8"	42.9	1
Refugio	Refugio-Heard	Commercial Prod. Co's Shelly Ryals et al 5, 298 fr nl 298 fr nly/sl 330 fr ely/el 40.77-ac lse, 1 mi w Refugio.	10- 6-46	7008	5400- 5408	Sd; Oligocene	F 122; 1/4"	38	1
San Patricio	Midway	F. M. Boykin, Jr. et al's H. H. Hutto 1, 467 fr wl 330 fr nl 40-ac lse, nw nw sect 81 G. H. Paul sbdn Coleman-Fulton Pstr. Co. lands.	9-20-46	5143	5107- 5131	Hutto (Frio) sd; Olig.	F 170; 5/32"		2
San Patricio	Midway	F. M. Boykin, Jr's H. H. Hutto 3, 467 fr wl 660 fr nl sect 81, Geo. H. Paul's sbdn Coleman-Fulton Pstr. lds on 160-ac lse	10-27-46	6057	5680- 5686	Frio sd; Olig	F 164; 3/64"	31	4
San Patricio	Sinton, W.	Jones & Morgan's W. Ford 1, 330 fr s&wl blk 29, J. J. Welder sbdn, John Pollan sur and 28.6-ac lse.	10-23-46	5231	3460- 3468		F 151; 90% wtr; 3/4"	21	2
Victoria	Heyser	Magnolia's O. M. Lander 1, (OWWO) 38.43-ac lse, J. E. Galban sur, 318 sw No. 3.	3- 6-46	7444	7119- 7126	Frio sd; Mio	F 48; 108 wtr; 7/64"	46	1
		LOWER TEXAS COAST—Oil Field Extension							
Bee	Cosden-Wilcox	Mackhank Pet. Co's W. D. Walton et al 1, 330 fr nwl 1263 fr swl 300.8-ac lse, 2300 fr swl 2900 fr nwl John Pace sur, ⅝ mi sw ext.	9-29-46	7320	7066- 7072	Wilcox sd; Eoc	F 117; 1/8"	37	
		LOWER TEXAS COAST—New Distillate Fields							
Bee	Silva	Bridwell Oil Co's Silva Est. 1, 330 fr ne&nwl 100-ac lse, w cor F. O. Skidmore sur 4, 4½ mi s sw Yougeen gas prod, 3½ mi nw Tynan fld, 7½ mi ne Lucas fld.	4-18-46	4555	4377- 4390	Stillwell sd; Olig.	10; 1 mln; 7/64"	48.7	3
Bee	Strauch-Wilcox	Mills Bennett's Martha Berger et al 1, 660 fr el 660 fr swl at ra of w½ sect 19, 152.6-ac lse, J. M. Uranga gr.	3- 1-46	8890	8082- 8143	Luling sd; Eoc	F 192; 6 mln; 1/4"		2
Brooks	Cage	Shell's Cage Ranch 1, 758 fr wl 2879 fr nl J. Guzman sur, 24,242-ac lse, 3½ mi nw of Barrosa.	5-15-46	10009	8022- 8036	Vicksburg sd; Olig	80; 4.5 mln; 1/4"		1
Goliad		Sun's M. L. Patton 1, 467 fr swl 976.06-ac lse, 4000 n of San Antonio River, Maria Jesusa de Leon gr, 6 mi w Goliad.	8-18-46	10765	10670-10677	Carrizo-Wilcox sd; Eoc	F 34; 34 wtr; 12/64"	51	1
Hidalgo	Landa	Stanolin's Harry Landa 1, 3425 fr el & 8600 fr sl of Del Gato gr, 6 mi sw Donna.	11-20-46	9512	8380- 8396		F 70; 3 mln; 3/16"	55	1
Jim Wells	Falfurrias, E.	Shell's Wm. Van Hoogenhuyze 1, (OWWO) 660 fr n&el lot 6, blk 10, Burton & Danforth sbdn of Parrita Rch, 232.65-ac lse, de la Garza gr.	4-25-46	10086	9023- 9038	Vicksburg sd; Olig	108; 17.8 mln; 3/8"	48.2	1
Kleberg		Sun's E. G. Canales 4, 660 s of nl 3294-ac lse, 4643 w of el CC-SD&RGNG sur 339, 1⅜ mi se Tijerina-Canales fld.	11-10-47	11554	10225-10251		130; 9 wtr; 5.9 mln; 1/4"		1
Live Oak	Clay, W.	Continental's Mrs. Clay West Burns 2, 660 fr swl 1980 fr nwl Wesley Sellman sur, 7714-ac lse.	8-28-46	10214	10121-10132	Wilcox sd; Eoc	F 33; 3/4"		1
Nueces	Bishop	H. R. Smith-W. C. McBride's E. G. Whitten 1 (OWDD) 660 sl 660 fr el 160-ac lse, sw sect 153, F. Z. Bishop sbdn Weil Rch, 3 mi e Stratton fld.	8- 1-46	7878	7038- 7046	Frio sd; Olig	No gge; 30 mln; 3/64"	cond	1
Nueces	Minnie Bock, N.	Atlantic's Jas. H. Ewing 1, 660 fr nl 219-ac lse, s½ sect 46, M. Lopez de Herrera gr, 219-ac lse.	1-20-46	8284	8244- 8270	Frio sd; Olig	F 48; 32.6 mln; 1/4"	50	9
Refugio		Wil-Tex Oil Corp.-Herman E. Brown's Jamie Hynes 1, 2335 s of middle nl 3375 fr ely/el 814-ac lse, M. Arocha sur, 1 mi nw old Refugio fld.	11-10-46	7453	6480- 6482		F 450; 18 mln		1
San Patricio	Beasley	Southern Minerals Corp's John R. & Floy L. Beasley 1, 990 fr sel 3200 fr nel 1004-ac lse, 4900 fr nwl 335 fr nel V. Juarez sur, 1 mi nw Clifton 1, dry hole.	7- 7-46	4999	4900- 4908	Vicksburg sd; Olig	F 10; 3/64"		1

[1] "Completion horizon" indicates depth interval from which production came in discovery well. [2] Character of producing formations abbreviated thus: ch, chalk; dolo, dolomite; ll, limestone; sd, sandstone; sh, shale; ser, serpentine; cgl, conglomerate. Ages of formations abbreviated thus: Pleis, Pleistocene; Plio, Pliocene; Mio, Miocene; Olig, Oligocene; Eoc, Eocene; U. Cre, Upper Cretaceous; L. Cre, Lower Cretaceous; Jur, Jurassic; Tri, Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Lower Mississippian; Devo, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian. [3] Barrels of oil per day (24 hr. rate) flowing (F), pumping (P), swabbing (Sw), or bailing (B); or million cubic feet of gas daily open flow capacity; size of choke given in inches. [4] This final column shows number of producing wells at end of 1946 in the new field, new pay zone, or extension area opened by the productive exploratory well listed.



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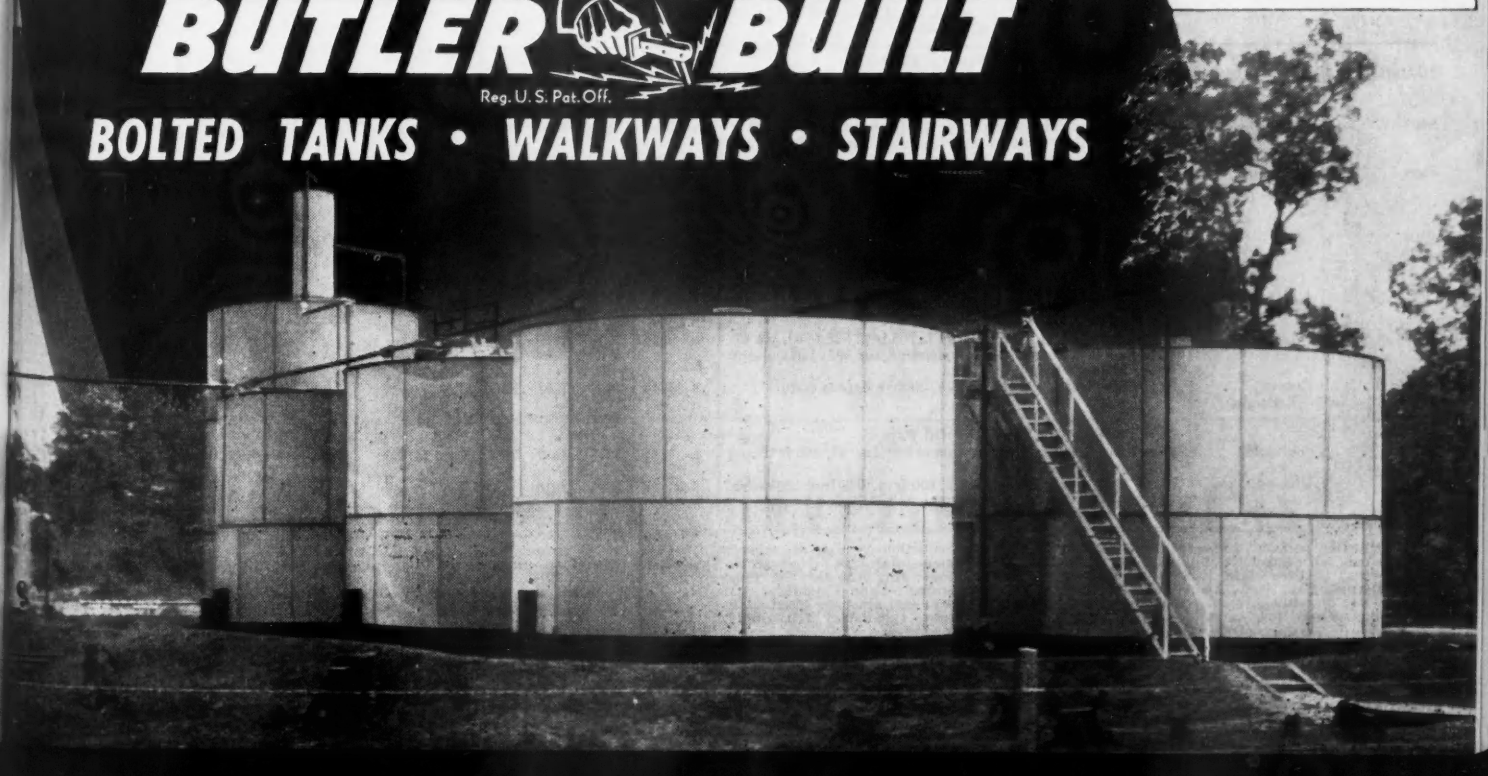


SALIENT DATA ON PRODUCTIVE EXPLORATORY WELLS COMPLETED IN U. S. IN 1946

County	Field	COMPANY, WELL AND LOCATION	Date Completed	Total Depth (Feet)	[1]Completion Horizon (Feet)	[2]Name, Character and Age of Producing Formation	[3]Initial Production: Method and Choke	Gravity of Oil	[4]Prod. Wells Year End
		LOWER TEXAS COAST—New Dist. Fields—(Continued)							
Victoria	Welder Ranch	Sterling O & R Corp's J. J. Welder 2, 11,371.89-ac lse, S. A. Belding sur on 640-ac blk.	3-12-46	5750	5690- 5713	Frio sd; Mio	F 40; 1.7 mln; 1/8"	....	1
Willacy	Paso Real	Magnolia's F. Armenadiz 2, 5350 fr nl 6540 fr el 8248-ac lse, San Juan de Carricitos gr, 9 mi ne San Dominio, 6½ mi se Willamar fld.	11- 1-46	9707	8585- 8600	.....	No gge; 13 mln	....	1
		LOWER TEXAS COAST—New Distillate Pays							
Bee	Silva	Bridwell Oil Co's Jake Huble Est. 1, 330 fr se&swl 200-ac lse, 330 fr sel 2350 swl Brooks & Burleson sur.	6-11-46	4500	3432- 3442	Frio sd; Olig	F 8; .4 mln; 3/32"	....	1
Brooks	Alta Mesa, E.	Standard of Tex.'s B. G. de Garcia lse, 1-6, 1400 fr wl 3100 fr sl 2161-ac lse 1, La Encantada gr.	12-18-46	6740	6246- 6258	Frio sd; Olig	F 52; 2.3 mln; 1/4"	....	1
Brooks	Dan Sullivan	Sun's D. J. Sullivan 6, 8300 e of wl El Tule gr, 660 n of Olmos Creek on 15.753-ac lse.	9-15-46	13206	10275-10293	Vicksburg sd; Olig	F 102; 7.6 mln; 1/4"	....	1
Dewitt	Yoakum	Pure's A. F. Karl 1, (OWWO) 660 fr ne&sel 78.33-ac lse, John May sur, ½ mi s Rice 1, gas-dist disc well.	4-10-46	11334	8272- 8296	Wilcox sd; Eoc	F 36; 1.8 mln; 5/32"	51.5	1
Goliad	Sarco Creek	Ginther, Warren & Ginther's Carrie G. Wood et al 3, 1487-ac lse, Geo. Villa sur, 9 mi se Goliad.	12- 9-45	5105	4148- 4158 5032- 5045	Frio sd; Mio Vicksburg sd; Olig	F 5.5 mln; 3/16" F 70; 1.6 mln;	....	1 ..
Hidalgo	Los Indios	Baldridge & King's W. L. Goldston 2, 3107 fr el 5750 fr sl, 7358-ac lse, Sta. Anita gr, 5100 s sw of well 1 on same lse.	1-20-46	8449	6030- 6058	Frio sd; Mio	F 75; 2.9 mln; 1/4"	53	1
Hidalgo	McAllen	Coastal Ref.-Cock & Thompson's O. L. Biedenharn 1, 330 fr n&el lot 4 blk 12, Steele & Pershing sbdn and 25.5-ac lse, Felix Hinojosa Porc 66.	9- 4-46	9302	7687- 7757	Frio sd; Olig	F 60; 3.5 mln; 1/4"	51	1
		LOWER TEXAS COAST—Distillate Field Extensions							
Bee	Silva	Bridwell Oil Co's J. W. Baird 1, 330 fr s&el J. G. Rountree sur, 8, on 350-ac lse, 1 mi w ext.	5- 6-46	4407	4392- 4395	Stillwell sd; Olig	18; 1 mln; 5/32"	....	..
Willacy	La Sal Vieja	Magnolia-J. S. Abercrombie Co's C. E. Todd 1, 1936.4 fr wl lot 6, 675 fr sl lot 7 blk 1 on 500.5-ac lse, San Juan de Carricitos gr, abt 2 mi nw of La Sal Vieja fld.	5- 1-46	11651	7540- 7560	Frio sd; Olig	40; 4 mln; 5/32"	55	..
		LOWER TEXAS COAST—New Gas Field							
Jackson	Morales	Hewit & Dougherty's A. A. Johnson 1, 660 fr ne & sel 160-ac lse and lot 3, Wm. Whitaker sur, 10 mi n of Edna.	5-22-46	4760	4150- 4160	.....	2.5 mln; 1/4"	....	2
Nueces	.....	Jack Little Tr's Mrs. E. V. Rieber 1, 467 fr s&wl 60-ac lse, and 400-ac tr J. J. de la Garza Montemayor & Sons gr, 1 mi n Richard King fld.	10-15-46	5797	5150- 5155	.....	9 mln; ½"	....	1
Refugio	.....	Clymore Co's John L. Zarsky 1, 650 ne of swl 304-ac lse 2904 w of el lse and sw¼ sect 46 of Johnson & Pugh sbdn of Bonnie View Rch, 1 mi n La Rosa fld, 1¾ mi sw La Rosa, N. fld.	12-27-46	7035	4926- 4937	.....	F 50 mln	....	1
		LOWER TEXAS COAST—New Gas Pays							
Bee	Tynan	Producers Corp. of Nev's W. A. Karsch et al 2, 467 fr ne&nwl nwly port 192.5-ac tr, H. H. Williams sur out of 400-ac lse, 2020 se Karsch 1.	7-10-46	4741	4682-	Stillwell sd; Olig	F 1.5 mln; 3/16"	....	1
Hidalgo	Los Indios	Baldridge & King's W. L. Goldston et al 4, 7747 fr el, 1847 fr wl, 5757 fr sl 7358-ac lse, 4640 w of Goldston 2, 2000 w of Goldston 3, dry hole.	7- 1-46	7207	5710- 5720	Frio sd; Olig	No gge	....	1
Jim Wells	Magnolia City, W.	Ralph Fair's Filter 1, 330 fr n&ne lines 80-ac lse, blk 7, Chas. Seefeld Farm Lands.	6-25-46	5845	3752- 3753	Frio sd; Olig	F 2.2 mln; 1/4"	....	1
San Patricio	Midway	F. M. Boykin, Jr's H. H. Hutto 4, 467 fr wl 1160 fr nl 160-ac lse, nw¼ sect 81, G. H. Paul sbdn CFP Co. Ld.	12-15-46	3660	3630- 3638	.....	F 20 mln	....	1
Victoria	Placedo, E.	Stanolind's Vendeberge & Hill 18, 8700 ne alg nwl 995.85-ac lse, E. Benavides gr, ne prod.	5-25-46	7524	6420- 6424	Frio sd; Olig	F 3 mln; 1/4"	....	1
		LOWER TEXAS COAST—Gas Field Extensions							
Goliad	Sarco Creek	Ginther, Warren & Ginther's Carrie G. Wood et al 4, 660 fr nel, se & swl blk 12, Pedro Villa sur, on 3749.9-ac lse.	12- 1-45	5278	5038- 5047 4655- 4680	Vicksburg sd; Olig Frio sd; Mio	F 5.6 mln; 3/8" F 6.5 mln; 1/16"	....	.. ..
Jackson	Texana, s	Donald W. Moore-T. J. Ahern's E. A. Clement et al's 1, 1320 fr nl 330 fr el 79.4-ac lse, w½ lot 17, Clement sbdn, S. F. Austin 2-Lge gr, 3/5 mi e ext.	7- 1-46	6823	5595- 5605	Frio sd; Olig	F 6.2 mln; 3/8"	....	..
Kleberg	Borregas	Humble's King Ranch-Borregas 3, 5138 nw of well 1, disc, on 40,591-ac lse, 38,669 fr el 36,000 fr nl Sta. Gertrudis gr.	11-15-46	8383	.....	.....	No gge	....	..
Refugio	McFadden	Barnsdall's Mrs. E. T. Morrow 1, 467 fr n&el 97.1-ac lse, in nec Edward Perry sur, 1 mi s McFadden gas prod, 1¼ mi sw McFadden oil prod.	9-10-46	7165	2251- 2262	Miocene	No gge; 1/4"	....	
Victoria	Keeran, N.	Roxoil Drlg. Co's J. J. McCutcheon 1, 330 fr ne&sel 400-ac lse, 330 fr sw&sel blk 12, Brown & Dodd sbdn, 330 nw of sel Agipito de Leon gr, ½ mi sw ext.	8-15-46	4755	4699- 4715	Frio sd; Olig	N gge; 1/8"	....	..
		SOUTHWEST TEXAS—New Oil Fields							
McMullen	.....	Dee Davenport's Annie Graves Dolph et al 6-A, 330 fr n&wl se se sect 65, Shumway sbdn Shiner Rch on 200-ac lse, L. Musquiz sur 12, 8 mi sw Ezzell fld.	8- 1-46	1390	1379- 1390	Jackson sd; Eoc.	P 5	....	1
Starr	Holland	W. H. Holland's Roos-Bennett 1, 330 fr n&el 12-ac lse, 1830 fr el 2600 fr nl sh 100 Porc 93, 12 mi e ne Rio Grande City, se Boyle, nw Garcia flds.	5-27-46	3434	2959- 2966	Vicksburg sd; Olig	F 147; 1/4"	24	3
Starr	Rincon, S.	W. D. Kennard's M. M. Garcia 1, 330 fr el 430 fr sl blk 29, tr 215, sh 12, porc 90, 4200 w nw n Boyle prod, 5600 s of Rincon sw ext prod.	7-22-46	3541	3500- 3504	Frio sd; Olig	F 102; 1/8"	41.5	1
Starr	.....	Daubert-Achning's M. Villareal 1, 330 fr s&wl n 203-ac of blk 5, Sta. Cruz gr, 6600 se Kelsey fld, 7500 e of Kelsey S. 5700-ft sd disc.	12- 2-46	5988	5954- 5967	Frio sd; Olig	F 152; 1/8"	41	1
Starr	.....	V. F. Neuhaus (was Tarver & Stagg's) Loreto Canales 1, (OWDD) 498 fr se&nwl 4700 fr swl tr 3-B out of sh 2, Parcel "B" Sacatosa gr, 262.18-ac lse.	12-20-46	1715	1700- 1714	.....	P 2	42	1
Webb	Hughes	Killam-Hurd's J. G. Garcia Heirs 1, 795 fr nl 928 fr wl, blk 47, Hughes Pet. Co. sbdn, Los Ojuelos gr, sur 592, 160-ac lse, 1 mi e Mirando City fld.	8- 9-46	1920	1870- 1874	Jackson sd; Eoc	P 109; 25% wtr.	21	5
Zapata	Charco Redondo, E.	F. P. Schwab et al's A Garcia 1-A, 20 mi e Zapata town.	8-25-46	1698	1691- 1698	.....	P 60	26.7	2
		SOUTHWEST TEXAS—New Oil Pays							
Duval	Southland	Hiawatha Oil & Gas Co's Southland Life Ins. 41, 466 fr nl and 2300 fr el sec 17.	8- 1-46	5510	3885- 3888	Cole sd; Eoc	F 80; 5/32"	38.8	1
Starr	Holland	W. H. Holland's Roos-Bennett 2, 330 fr sl 1068 fr el 120-ac lse, sh 100 Porc 93, 933 sw Roos-Bennett 1, disc well.	6-21-46	3006	2910-	Vicksburg sd; Olig	F 66; 1/4"	22.8	1

[1] "Completion horizon" indicates depth interval from which production came in discovery well. [2] Character of producing formations abbreviated thus: ch, chalk; dolo, dolomite; ll, limestone; sd, sandstone; sh, shale; ser, serpentine; cgl, conglomerate. Ages of formations abbreviated thus: Plels, Pleistocene; Plio, Pliocene; Mio, Miocene; Olig, Oligocene; Eoc, Eocene; U. Cre, Upper Cretaceous; L. Cre, Lower Cretaceous; Jur, Jurassic; Tri Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Miss, Lower Mississippian; Devo, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian. [3] Barrels of oil per day (24 hr. rate) flowing (F), pumping (P), swabbing (Sw), or bailing (B); or million cubic feet of gas daily open flow capacity; size of choke given in inches. [4] This final column shows number of producing wells at end of 1946 in the new field, new pay zone, or extension area opened by the productive exploratory well listed.

BILL
(Superintendent)

JOE
(Toolpusher)

BILL—"Say, Joe— how come you took up so much time getting that inclination survey on N.C.B. No. 7? Appears to me as tho your drilling crews must have gone on strike."

JOE—"Gosh, Bill, that record came up with a result that just couldn't possibly be right —that is if I know anything about drilling. If that hole had been that much off we'd never gotten the bit out."

BILL—"Well, that's what you get for using one of those mechanically operated survey instruments."

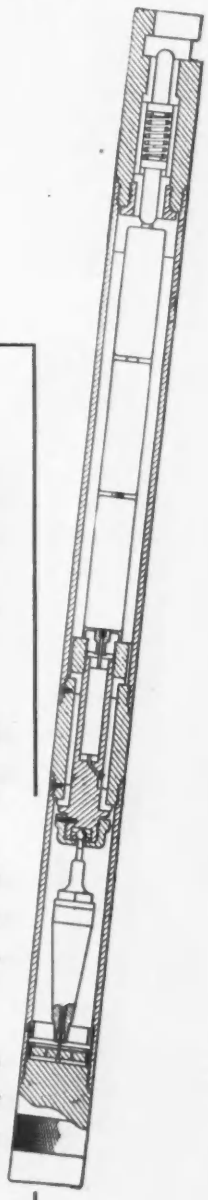
JOE—"How come?"

BILL—"Because in mechanically operated instruments, you are liable to make a record **before** the plumb bob comes to a standstill. Way off the line!

"Why don't you get wise to the E-C Inclinometer. It records automatically and you **can't** get a record unless the plumb bob is standing still. So—there's no uncertainty — no new runs necessary — no time lost. That's why operators everywhere are turning to the E-C."

6 WAYS OF USING THE E-C

1. **On Measuring Line.**
2. **On Sand Line.**
3. **As a Go-Devil and recovered when changing bit.**
4. **As a Go-Devil and picked up with a core-barrel overshot.**
5. **Run in with a core-barrel overshot when picking up a core.**
6. **Run inside of bailer in cable tool drilling.**



SPERRY-SUN

SPERRY-SUN WELL SURVEYING COMPANY

Offices: Philadelphia, Pa.; Houston, Corpus Christi, Falfurrias, Marshall, Odessa, Texas; Lafayette, La.; Long Beach, Bakersfield, Calif.; Oklahoma City, Okla.; Casper, Wyo.

SALIENT DATA ON PRODUCTIVE EXPLORATORY WELLS COMPLETED IN U. S. IN 1946

County	Field	COMPANY, WELL AND LOCATION	Date Completed	Total Depth (Feet)	[1]Completion Horizon (Feet)	[2]Name, Character and Age of Producing Formation	[3]Initial Production: Method and Choke	Gravity of Oil	[4]Prod. Wells Year End
		SOUTHWEST TEXAS—New Oil Pay—(Continued)							
Starr	Kelsey	J. C. Clark Jr's Gonzales 2-A, 800 fr wl 1400 fr nl 158.56-ac "A" unit, tr 3-A, Santa Teresa gr, 960 s sw Gonzales A-1, s ext well in shallow pay.	8- 4-46	5739	5706- 5718	Frio sd; Olig	F 150; 1/2"	42.8	1
Starr	Kelsey, S	J. O. Clark, Jr's Margarita G. de Juarez 1, 467 fr n&wl 151.61-ac lse Sta. Teresa gr, 2250 se Gonzales 2-A, dp sd disc in fld.	12-28-46	7272	5364- 5372 5869- 5876	Frio sd; Olig Frio sd; Olig	F 144; 24/64" F 124; 24/64"	51 42	1 1
Starr	La Reforma	Baldridge & King's A. Guerra Est. 1, 1000 e of wl tr 7, 1135 s of Porter & Pickens' A. Guerra 1.	2- 3-46	6150	6113- 6150	Yegua sd; Eoc	F 146; 1/8"	42	1
		SOUTHWEST TEXAS—Oil Field Extensions							
Starr	Rincon	Continental's Mrs. Bess S. Semmes 1, 330 fr el 1650 fr sl, sur 906, on 640-ac lse, 7000 n ne Frio prod, 3/8 mi nw ext.	7- 7-46	4710	4529- 4531	Frio sd; Olig	F 6	....	..
Starr	Rincon	Geo. H. Echol's M. M. Garcia 2, 330 fr s&el blk 29, tr 215 Porc 90, on 40-ac lse, nw Boyle, sw Rincon fld, (4400 w of m/nly/ well at Boyle) 3/4 mi w ext.	5- 4-46	4106	3394- 3412	Frio sd; Olig	F 20; 1/4"	42	..
Star	Sun	Humble's Sabas Garza Pena et al 1, 467 fr sl 1251 fr wl 100-ac tr out of 283.36-ac lse, 1/2 mi n ext of se flk.	10-12-46	5258	4626- 4642	Frio sd; Olig	F 109; 24/64"	46	..
		SOUTHWEST TEXAS—New Distillate Pay							
Starr	Yturria	Sun's B. G. de Garcia 3, 467 e fr wl Ygnacia Travino Porc 98, 3002 s sw No. 2 dry hole, 3500 sw of shallow prod.	8-15-46	6380	6318- 6333	Frio sd; Olig	No gge; 3/8"	55	1
		SOUTHWEST TEXAS—New Gas Fields							
Duval	Palangana	H. H. Howell's Lizzie Singer 3, 330 fr el 1570 fr nl G. Cumberland sur 4, 5 mi n Benavides, 1880 se Singer 2 dry hole.	8- -46	1725	1683- 1705	U Miocene sd	F 50 mln	....	3
McMullen	County Line	J. W. Gorman's Roos Bros. 1, 990 fr wl 330 fr nl AB&M sur, sect 75, 1 1/2 mi s of Campana, S. fld.	1- 7-46	3176	1926- 1973	Jackson sd; Eoc	F 2.2 mln	....	1
Webb	Andrews	Dulaney Oil Co's State of Texas 3, 330 fr swl 330 fr sly nl state sur 838 on 69.5-ac lse, 1 mi sw Aviators.	6-13-46	1560	1501- 1560	Jackson sd; Olig	F .2 mln	....	1
Webb	Hirsch	Sun's Issac Hirsch et al 21, 2000 fr el 2700 fr sl sur 2030, 2880-ac lse.	4-15-46	7530	6905- 7020	Wilcox sd; Eoc	F 1.4 mln; 8/16"	....	1
		SOUTHWEST TEXAS—New Gas Pays							
Duval	Strake	Santa Clara Oil Co.-Maguire Industries' J. O. Yates 2-A, 330 fr sl 1333 1/2 fr el Jessie Harris sur 5, on s 60-ac of "A" lse, n of prod.	7- 1-46	3795	2252- 2263	L Frio sd	F 10 mln	....	1
Jim Hogg	Patel	Newman Bros Drlg. Co et al's Julian V. Pena 1, (OWWO) 330 fr s&el lot 32, M. W. White sbdn, Mrs. L. Bartlett sur, 589, El Peyote gr, 40-ac lse.	11- 7-46	2977	1576- 1583		No gge; 8/16"	....	1
Starr	Rincon, S	W. H. Holland's M. M. Garcia 1, 330 fr n&wl blk 21, sbdn Porc 91, 2200 n ne Kennard's Garcia 1, disc well.	9-20-46	3930	2925- 2937	Frio sd	No gge; 1/4"	....	1
Webb	Albercas, N	Blanco Oil Co.-Al Buchanan's A. M. Bruni Est. 5, 765 fr el 100 fr sl blk 28, Brown sbdn Albercas gr, 480-ac lse.	4-11-46	2649	2520- 2532	Pettus sd; Eoc	No gge	....	1
		SOUTHWEST TEXAS—Gas Field Extensions							
Duval	Palangana	H. H. Howell's Wm. Singer Est. 1-A, 330 fr n&wl 80-ac lse, 2264 fr el 3410 fr sl G. Cumberland sur, 4, 3350 sw Howell's Singer 3, gas disc on e flk Palangana salt dome, 3/8 mi sw ext.	11-15-46	1940	1650- 1673	U Miocene sd; Mio	No gge	....	..
Duval	Peters	Edwin B. Cox-Jake L. Hamon's Leila Peters 1, 330 fr nl 1282 fr wl BS&F sur 194, on 1199-ac lse, 1 mi se Peters fld.	7-20-46	2700	2612- 2618	Jackson sd; Eoc	F 8.5 mln	....	..
Duval	Seven Sisters	Hickok & Reynolds' J. F. Welder Heirs 8-C, 990 fr nl 330 fr el 540-ac lse, 4950 fr wl 6270 fr nl S. Alexander sur 102, 1 mi w ext.	11-30-46	3110	2521- 2527	Loma Novia sd; Olig	F 3.8 mln	....	..
		SOUTH CENTRAL TEXAS—New Oil Fields							
Atascosa	Fashing	H. R. Smith & Skinner & Eddy Corp's Wiegang 1, A. S. Donovan sur, 145, 467 fr sw & 2750 fr sel.	7- 6-46	3781	3771- 3777	Wilcox sd; Eoc	F 170	24.5	8
Atascosa	Muil	Quintana Pet. Corp's C. Muil 1, 2714 fr nel 5000 fr sel 1589-ac lse, J. C. Mattison sur 467 (OWDD).	1-20-46	9105	8836- 8936	U Edwards li; L Cre	F 100; 3.5 mln; 1/4"	48	3
Bexar	Rosilla Creek	Harry S. Stahl's Pablo Verjeda 1, 1000 fr s & wl 200-ac of 390-ac tr (blk 11), N. Montaya sur, 21, 2 mi n Eckart fld.	2- 1-46	863	845- 850	Navarro sd; U Cre	P 1 1/2	38	1
Guadalupe		United North & South Dev. Co's J. F. Webb 1, 1270 fr nely/ nel 330 fr sely/nwl 151.8-ac lse, Jas Hodges sur, 2 mi sw Day fld	6-28-46	2525	2421- 2453 2485- 2505	Serpentine sd; U Cre Austin ch; U Cre	P 175; 50% wtr	....	1
Guadalupe		Wiegand Well Servicing Co's L. A. Anderson 1, 330 fr nwl 1000 fr swl 101-ac lse in Harriet Cottle sur, 1/2 mi s Luling fld.	12-15-46	2050	1850- 2050		P 2	....	1
Milam	Holcomb	R. L. Reynolds et al's J. L. Byrd 2, 1320 fr nwl 1551 fr swl 189.1 ac lse, J. J. Acosta gr, 468 ne Byrd 1, dry hole.	3- 1-46	1884	1210- 1220	Austin ch; U Cre	P 55	34	1
Milam	Willow Flat	McCrary Oil Co's J. R. & M. A. McCrary 1, ne end Niles F. Smith sur, 1 1/2 mi n Calvert fld, 560-ac lse.	4- 1-46	2120	2095- 2120	Nacatosh sd; L Cre	P 95	36	1
		SOUTH CENTRAL TEXAS—New Gas Pay							
Frio	Pearsall	Highland Oil Co's Halff & Oppenheimer 12, 1242-ac lse, J. H. Gibson sur 15, 874 n of well 3, 874 s of well 10.	7- 3-46	4335	4273- 4279	Navarro sd; U Cre	36 cond; 36 mln	....	1
		UTAH—New Oil Field							
Grand	Crescent	Utah Drlg. & Dev. Co's State 2, nw nw ne 16-22s-19e	2- -46	1215	1123- 1138	Dakota sd; U Cre	Sw 25	38	1
		WEST VIRGINIA—New Oil Pays							
Braxton	Rosedale	Creed Yoak's Stump & Fisher 1, Birch dist.	7- -46	2203		Big li; Miss	F 10; 40 wtr; 1 mln	....	..
Ritchie		A. R. Kelly et al's O. C. Beckner 2, Grant dist. 26 mi e of Parkersburg on Buffalo Run of Hughes river.	4- 6-46	2485	2473- 2485	Warren sd; U Devo	F 25; .2 mln	....	..
		WEST VIRGINIA—Oil Field Extension							
Calhoun	Millstone	McCall Drilling Co's Garret Heirs 1, Lee dist.	9- -46	2038		Big Injun sd; Miss	F 28; .2 mln	....	..
		WEST VIRGINIA—New Gas Fields							
Fayette	Graydon	Godfrey L. Cabot, Inc's Susan Kincaid 1-1206, Mt. Cove dist.	7- -46	1280	1136- 1255	Salt sd; Penn	F .12 mln	....	..
Fayette		Godfrey L. Cabot, Inc's Raymond Kious 1, Mountain Cove dist.	9- -46	1266	1257- 1265	Salt sd; Penn	F .66 mln	....	..
Jackson		Aileen O & G Co's Hickman 1, Ripley dist.	6- -46	5011	4992- 5004	Oriskany sd; L Devo	6 mln	....	..
Jackson		Sycamore Gas Co's Susie Staats 1, Ripley dist.	1- -46	4838	4774- 4811	Oriskany sd; Devo	1.1 mln	....	..
Nicholas		Pittsburgh & West Virginia Gas Co's Elk River Coal and Lbr Co. 112=8075, Hamilton dist.	12-31-45	2363	2163- 2165	Big li; Miss	.16 mln	....	..
Tucker		Ohio Oil Co's Kuykendall Unit2, Dry Fork dist.	2- -46	8404	8305- 8404	Oriskany sd; Devo	F 3.8 mln	....	..
		WEST VIRGINIA—Gas Field Extensions							
Clay	Villa Nova	Pittsburgh & West Virginia Gas Co's Elk River Coal & Lbr Co. 120-8083, Buffalo dist.	5-22-46	2081	2024- 2030	Big li; Miss	F .05 mln	....	..
Clay	Villa Nova	Pittsburgh & West Virginia Gas Co's Elk River Coal & Lbr. Co. 121-8084, Buffalo dist, 3 mi se ext.	5-29-46	1667	1661- 1667	Big li; Miss	F 2.3 mln	....	..

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King Oil Tools

Be Sure IT'S A KING *Be Safe*

4C Circulating Head

KING 4C CIRCULATING HEAD

provides circulation and rotation in connection with wire line equipment. It is short, compact and withstands extreme high pressures in deep drilling.

Bearings sealed in oil-tight housing with grease nipples conveniently located; packing, single moulded ring, self-sealing and held in position by a Manganese-Bronze retainer. Packing easily renewed. API tool joint pin, 3" I.D. opening through spindle; gooseneck threaded for 3" line pipe, female; top connection 4" line pipe, female. An effective unit when used in combination with King 4AR Line Stripper.

AR Line Stripper

KING WIRE LINE STRIPPERS

King Wire Line Strippers are automatic release type, having a positive latch and a sure release. Bronze rollers guide the line and are equipped with grease nipples for lubrication. Rubber strippers are inserted from the sides and can be renewed while the line is in the hole. These tools are non-sparking which lessens the fire hazard.

The 4AR Type is used mainly in wire line coring and 3AR Type is usually used for swabbing.

KING 32GA AND 53GA SWIVELS

King 32GA and King 53GA Swivels are being used in workovers on rigs in the very deepest wells—from 11,000' to 12,000'.

These swivels are also for drilling shallow and medium depth oil wells and deep water wells.

IMPORTANT FEATURES:

Bails of hammer forged alloy steel.
Bail gudgeon pins of heat-treated alloy steel.
Housings of alloy steel castings.
Washpipes of seamless steel tubes, case hardened.
V-Type packings; grease lubrication to all packing; bronze packing glands.
Kelly connections: 32GA 3½" drill pipe thread, left hand, male; 53GA 4½" drill pipe thread, left hand, male.
Hose connection: National Pipe thread or with other connections to order.

10-LV Swivel
Patent Pending

KING TYPE 10-LV SWIVEL

This swivel is intended, primarily, for use with Geophysical Shot Hole Rigs. It has many novel features which insure long and satisfactory service.

The bearings are sealed in an oil tight housing and are provided with a means of lubrication. The packing is a self-sealing, moulded ring which will run for many weeks before renewal becomes necessary.

A similar Swivel, designated as Type 10-PD, is recommended for rigs which are equipped with a mechanical *pull-down* attachment.

Patented

King GA Swivel

All prices F.O.B. Houston, Texas, and subject to change without notice.
Sold through your supply store

Export: **R. S. STOKVIS & SONS, Inc., 17 Battery Place, New York 4, N. Y.**

KING OIL TOOLS
210 TERMINAL STREET PHONE W 6-8013
HOUSTON 10, TEXAS

SALIENT DATA ON PRODUCTIVE EXPLORATORY WELLS COMPLETED IN U. S. IN 1946

County	Field	COMPANY, WELL AND LOCATION	Date Completed	Total Depth (Feet)	[1]Completion Horizon (Feet)	[2]Name, Character and Age of Producing Formation	[3]Initial Production: Method and Choke	Gravity of Oil	[4]Prod. Wells Year End
		WEST VIRGINIA—Gas Field Extensions—(Continued)							
Doddridge	Porto Rico	P. & M. Oil Co's Evelyn Williams 1, Southwest dist.	8- -46	1704		Injun sd; Miss	F 1.4 mln		
Jackson	Charleston	McIntosh & Grimm's B. F. Rader 1, Ravenswood dist. nw ext.	6-10-46	5014	5001- 5011	Oriskany sd; L Devo	F 2.4 mln		
Jackson	Charleston	McIntosh & Grimm's Mary Vosburg 1, Ravenswood dist, nw ext.	7-21-46	5115	5103- 5110	Oriskany sd; L Devo	F 10 mln		
Jackson	Charleston	United Carbon Co's J. H. Waskey 1-1348, Ravenswood dist, nw ext.	5-12-46	5101	5077- 5082	Oriskany sd; L Devo	F 4.9 mln		
Jackson	Charleston	West Virginia Gas Corp's Howard Hopkins 1-534, Ripley dist.	6- 6-46	5007	4973- 4984	Oriskany sd; L Devo	F 1.3 mln		
Kanawha	Charleston	Columbian Carbon Co's D. W. Hughes 871, Elk dist, se ext.	7- 2-46	5220	5147- 5181	Oriskany sd; L Devo	F 14; 14.9 mln		
Kanawha	Charleston	Glen Dearth's Roxalena Acree 1, Elk dist, se ext.	7-21-46	5277	5198- 5277	Oriskany sd; L Devo	4.7 mln		
Kanawha	Charleston	A. C. Radford et al's Daniel Robertson 1, Elk dist, se ext.	4-19-46	5474	5458- 5467	Oriskany sd; L Devo	11.4 mln		
Tucker	Blackwater	Ohio Oil Co's Coffman-Kuykendall 1, Dry Fork dist, s ext.	3-25-46	8410		Oriskany sd; L Devo	4.1 mln		
Wyoming	Pineville	Hope Natural Gas Co's New River and Pocahontas Coal Co, 8907, Baileysville, dist.	4- 6-46	3852	3835- 3848	Berea sd; Miss	7.7 mln		
Wyoming	Pineville	United Producing Co's W. M. Ritter Lbr. Co, 26-1308, Baileysville dist, 1, mi nw ext.	4-22-46	3378	3354- 3373	Berea sd; Miss	5.5 mln		
		WYOMING—New Oil Fields							
Fremont	DuBois	Sinclair-Wyoming Oil Co's Unit 1, ne 11-42n-107w	2- 6-46	3571	2073- 2155	Embar li; Perm	P 160		1
Hot Springs	Corley	Continental's Vannoy 1, ne sw ne 3-43n-93w	4-22-46	4134	4100- 4134	Embar li; Perm	P 146	24.3	2
Washakie	River Dome	Pure Oil Co's Unit 1, ne ne nw 18-48n-92w	6- 1-46	11379	10020-10055	Embar li; Perm	F 60; 4.5 mln	41	3
		WYOMING—New Oil Pays							
Carbon	Bailey	Sinclair-Wyoming Oil Co's Bailey Unit 3, nw ne ne 21-26n-89w	1-25-46	7320	6966- 6986	Tensleep sd; Penn	Sw 228		1
Fremont	Circle Ridge	Continental's Shoshone 4, se sw nw 6-6n-2w	11-18-46	2864	1285- 1975	Madison li; Penn	Sw 125	23.8	1
Hot Springs	Black Mountain	Texas Co's State 3, nw ne se 36-43n-91w	7-30-46	4997	3865- 3874	Madison li; Miss	Sw 480; 120 w	22	1
		WYOMING—Oil Field Extensions							
Converse	Big Muddy	Dyer & Rice's Barber 1, nw se 3-33n-76w, 1 mi e ext.	7-13-46	4459	4383- 4398	L Dakota sd; U Cre	B 50	36	1
Fremont	Crook's Gap	General Pet. Corp's 72-19 Pat. sw ne ne 19-28n-92w, 1 mi se ext.	3- 9-46	5600	5218- 5254	Lakota sd; L Cre	F 200		2
Washakie	River Dome	Pure Oil Co's Unit 3, sw sw 17-48n-92w, 1 mi se ext.	10- -46	10151	10003-	Embar li; Perm	F 365; 9 mln; ¼"	39	
		WYOMING—New Distillate Field							
Uinta	Church Buttes	Mountain Fuel Supply Co's Unit 1, ne sw nw 8-16n-112w	5- -46	12895	12550-12606 12640-12674	Dakota sd; L Cre	F 500; 100 mln; ¼"	47	1
		WYOMING—New Gas Field							
Sweetwater	Table Rock	Texas Co.-Union Pacific R. R. Co's Unit 1, se nw nw 1-18n-98w, 30 mi e of Baxter Basin.	4-20-46	3831	3333- 3334	Lance sd; U Cre	F 5.7 mln		1
		WYOMING—New Gas Pay							
Park	Elk Basin, S	Continental's Ida Goodstein 3, sw ne sw 20-57n-99w	1-10-46	5910	5462- 5472	Dakota sd; L Cre	F 5.9 mln		2
		WYOMING—Gas Field Extension							
Fremont	Beaver Creek	Stanolind's Beaver Creek 2, nw nw sw 11-33n-96w, ¾ mi se ext.	1- 5-46	8108	8043- 8108	Lakota sd; L Cre	F 4.2 mln		4

[1] "Completion horizon" indicates depth interval from which production came in discovery well. [2] Character of producing formations abbreviated thus: ch, chalk; dolo, dolomite; li, limestone; sd, sandstone; sh, shale; ser, serpentine; cgl, conglomerate. Ages of formations abbreviated thus: Pleis, Pleistocene; Plio, Pliocene; Mio, Miocene; Olig, Oligocene; Eoc, Eocene; U. Cre, Upper Cretaceous; L. Cre, Lower Cretaceous; Jur, Jurassic; Tri Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Miss, Lower Mississippian; Devo, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian. [3] Barrels of oil per day (24 hr. rate) flowing (F), pumping (P), swabbing (Sw), or bailing (B); or million cubic feet of gas daily open flow capacity; size of choke given in inches. [4] This final column shows number of producing wells at end of 1946 in the new field, new pay zone, or extension area opened by the productive exploratory well listed.

Geophysical and Core Drilling Activity During 1946

A TOTAL of 419 geophysical and core drilling crews were known to be active in the United States at the end of 1946, according to an incomplete report of the Interstate Oil Compact Commission.

Of the total outfits, 369 were geophysical crews and 50 were core drillers. Most of the geophysical work was being done by seismic crews which totaled 251. Next in prominence was gravity meter crews numbering 95.

(Figures represent number of crews)

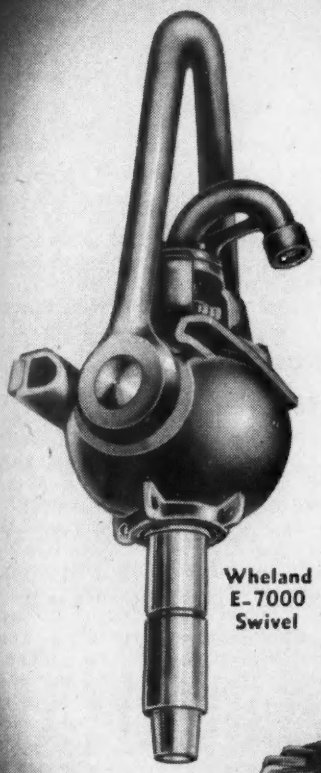
STATE	SEISMIC			GRAVITY			MAGNETOMETER			TORSION BALANCE			TOTAL GEOPHYSICAL			CORE DRILLING			TOTAL GEOPHYSICAL AND CORE DRILLING		
	Jan. 31,	June 30,	Dec. 31,	Jan. 31,	Jan. 30,	June 31,	Jan. 31,	June 30,	Dec. 31,	Jan. 31,	June 30,	Dec. 31,	Jan. 31,	June 30,	Dec. 31,	Jan. 31,	June 30,	Dec. 31,	Jan. 31,	June 30,	Dec. 31,
Alabama	n.a.	4	5	n.a.	5	6	n.a.	1	1	n.a.	..	..	n.a.	10	12	n.a.	4	3	n.a.	14	15
Arkansas	7	6	9	1	1	1	1	1	1	..	..	..	9	8	11	1	1	1	10	9	12
California	13	13	14	1	3	2	..	1	..	..	..	..	14	17	16	..	..	..	14	17	16
Colorado	2	5	8	4	6	9	1	1	3	..	..	..	7	12	20	..	..	..	7	12	20
Florida	2	2	2	5	6	3	1	1	1	..	..	..	8	9	6	7	4	4	15	13	10
Georgia	..	1	1	2	1	1	1	1	1	..	..	..	3	3	3	..	..	..	3	3	3
Indiana	1	3	..	..	..	..	..	..	..	..	..	..	1	3	..	1	2	..	2	5	..
*Kansas	n.a.	n.a.	1	n.a.	n.a.	..	n.a.	n.a.	..	n.a.	n.a.	..	n.a.	n.a.	1	n.a.	n.a.	7	n.a.	n.a.	8
*Louisiana	16	16	27	6	9	12	..	..	..	..	..	..	22	25	39	..	..	..	22	25	39
Michigan	n.a.	1	..	n.a.	..	..	n.a.	..	..	n.a.	..	..	n.a.	1	..	n.a.	5	5	n.a.	6	5
Mississippi	n.a.	29	31	n.a.	13	8	n.a.	..	2	n.a.	..	..	n.a.	42	41	n.a.	9	5	n.a.	51	46
Montana	2	4	1	..	1	1	..	..	..	..	..	..	2	5	2	..	1	..	2	6	2
Nebraska	..	..	1	..	..	1	..	..	..	..	..	..	..	..	2	..	..	..	..	..	2
New Mexico	7	7	10	11	8	19	7	9	7	2	1	..	27	25	36	..	1	..	27	26	36
North Dakota	..	..	1	..	1	..	..	..	..	..	..	..	..	1	1	..	..	..	..	1	1
*Oklahoma	n.a.	n.a.	25	n.a.	n.a.	3	n.a.	n.a.	2	n.a.	n.a.	..	n.a.	n.a.	30	n.a.	n.a.	12	n.a.	n.a.	42
South Dakota	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..
Tennessee	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..
*Texas	52	92	93	14	19	16	..	3	5	..	..	..	66	114	114	5	12	13	71	126	127
Utah	4	5	4	2	5	4	..	..	..	..	..	..	6	10	8	..	..	..	6	10	8
Wyoming	8	21	18	6	12	9	..	..	..	..	..	..	14	33	27	..	3	..	14	36	27
Total	115	210	251	52	90	95	11	18	23	2	1	..	180	319	369	14	42	50	194	361	419

SOURCE: Interstate Oil Compact Commission monthly statistical reports. * Data for Kansas and Oklahoma incomplete even where figures are given. Louisiana data covers only Southeastern section of state. Texas data covers only East and Southwest regions in figures for January 31, and covers only East, Southwest, and West Texas for other periods. n.a. means data not available.

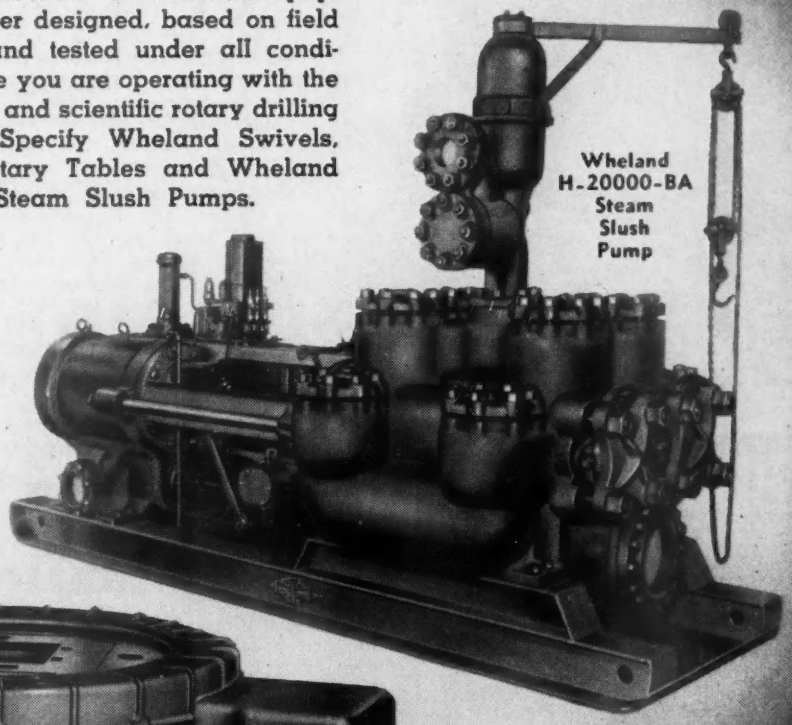
THERE'S NO MORE MYSTERY

TO DRILLING

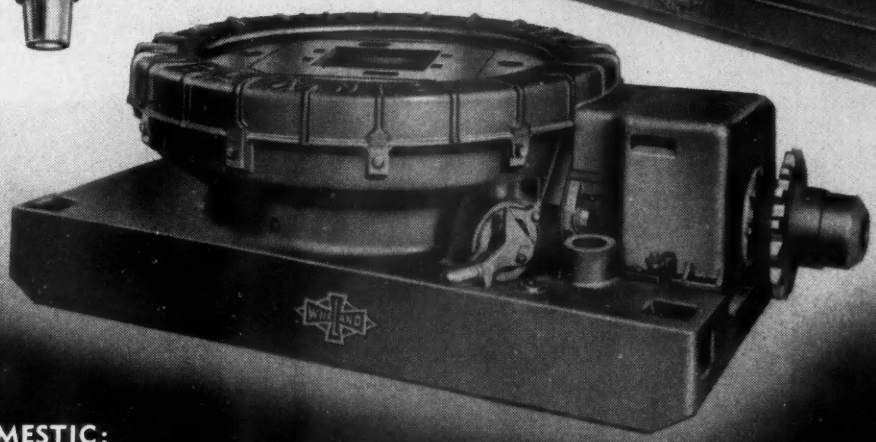
Yes, there is no more mystery to drilling. It's experience, not luck. It's science and skill and perfection. It's modern equipment, engineer designed, based on field experience and tested under all conditions. Be sure you are operating with the most modern and scientific rotary drilling equipment. Specify Wheland Swivels, Wheland Rotary Tables and Wheland Power and Steam Slush Pumps.



Wheland E-7000 Swivel



Wheland H-20000-BA Steam Slush Pump



Wheland A-18000-B Rotary Table

DOMESTIC:
Jones & Laughlin Supply Company
Tulsa, Oklahoma
Stores and Offices in all principal Oil Fields and Centers

EXPORT:
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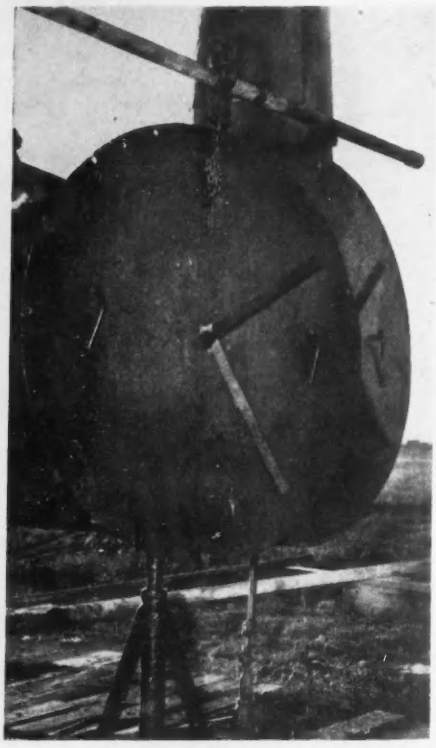
THE WHELAND COMPANY

ROTARY DRILLING EQUIPMENT

Chattanooga, Tenn.

Box Supports Facilitate Boiler Repairs



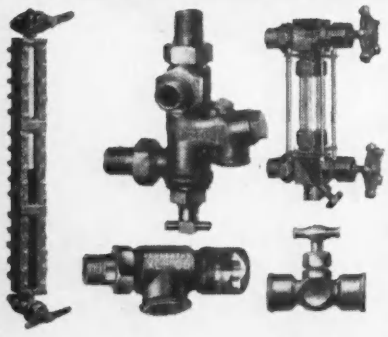
BOILER CARE

Removing the smoke-box door is usually a two-man job, but has been simplified by one contractor who carries, in special brackets, a rail of 1½-inch pipe across the front of the entire battery of boilers. Supported on special brackets which rest atop the boiler shell, the pipe provides a rail on which a single pulley may be run from one end of the setting to the other.

The door to be removed is attached to the pulley by a short chain, and the door bolts removed. The point of attachment of the chain is slightly off center, so that the door, when pried out of its recess, swings down a little to clear, and there it is supported entirely by the chain. It may then be pushed into the clear in either direction, and is held there ready for replacement.

When replacing the door, it is rolled back into place, and one side rotated just enough to bring the bolts and holes into alignment. A push inwardly then aligns door and bolts, leaving only the matter of running up the nuts to complete the replacement job. The pipe rail, held by a single bolt at each boiler, may be removed readily when tearing down for a shift of locations.

PENBERTHY
QUALITY
PRODUCTS



Penberthy liquid level gages of various types—injectors—ejectors—all so widely used throughout the oil industry because they have always been dependable under the most severe service conditions.

All are of rugged construction and made by an organization with 57 years experience in the manufacture of quality products.

See Pages 3126 to 3131 Composite Catalog

PENBERTHY INJECTOR CO.
DETROIT, MICH. Canadian Plant WINDSOR, ONTARIO

Flexible Hose Permits Shifting of Heater

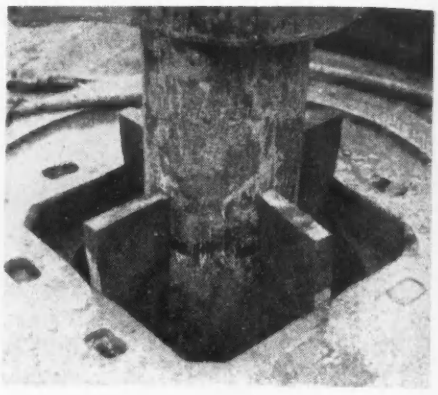
CREW COMFORT

Every driller probably has at some time or another designed his own version of a heater that would help him to keep warm on long cold tours, yet which would be small enough that it would not interfere with hoisting or other operations.

The field department of a company operating in the colder coastal areas designed and built a practical steam heater that embodies nearly all that could be desired of such a unit.

It consists of a series of two-inch pipes approximately six feet long and which are arranged vertically between two headers to form an obtuse angle, between the two sides of which the driller may stand or sit as he chooses. Steam enters the upper header via a flexible hose, with condensate running out through a similar hose at the bottom. Mounted on two short legs having square plates on the bottom to provide better footing, the unit may be moved about the rig floor to suit the varying needs, and when not in use, may be set up in a corner where little floor space is taken up.

Spacers Steady Casing



CEMENTING PRACTICES

One of the most critical periods in cementing a string of casing is that immediately following the job when the string stands cemented. Should movement of the pipe occur, or vibrations be transmitted down the string to the cement, success of the shutoff may be impaired. To ensure against the possibility of anyone or anything striking the casing, one company makes it a practice to drive 2 x 6-inch wedges between the string and the kelly bushing hole in the rotary table. As shown, the blocks are tapered and driven in edgeways, with the untapered sides in contact with the casing. Left in this position during the entire time between cementing and cleaning out the plug, such a precaution can well afford to be taken, and will pay dividends in improved cementing jobs.

Where Preference Points to Diamond Drives

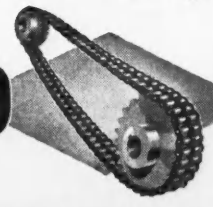
It is needless to emphasize the importance of sturdiness in engines for, as power producers they must be reliable . . . Likewise out in the big open spaces—the drilling for oil calls for rugged yet highly efficient machinery and rugged men who take pride in their accomplishments.

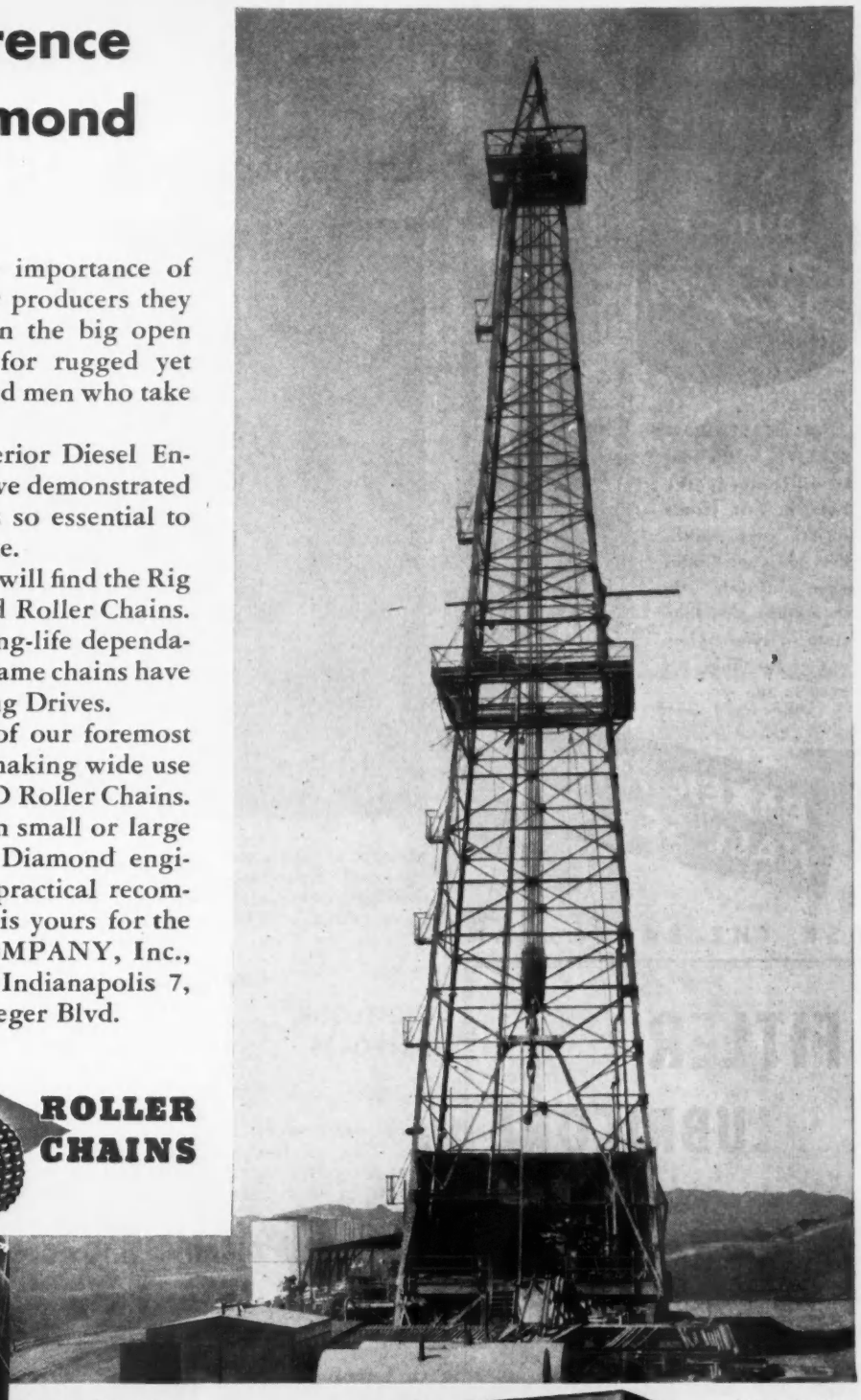
National Supply Company's Superior Diesel Engines and Drilling Rigs for years have demonstrated both the reliability and ruggedness so essential to efficient and economical performance.

To match such characteristics, you will find the Rig and Drawworks drives are Diamond Roller Chains. And on the Diesels—the accuracy, long-life dependability, and the adaptability of these same chains have given them preference for the Timing Drives.

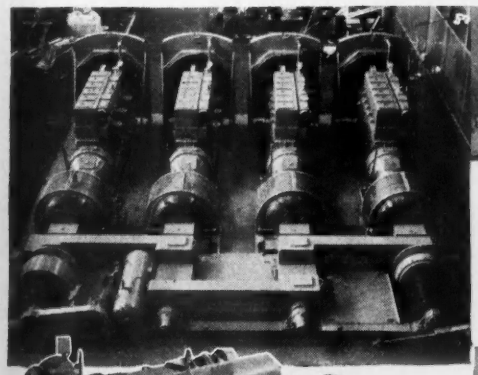
National Supply is but another of our foremost builders of a diversity of products making wide use of positive, high efficiency DIAMOND Roller Chains.

Whatever your drive problems—in small or large capacities, for high or low speeds, Diamond engineers can help save your time with practical recommendations. Drive Data Book 595 is yours for the asking. DIAMOND CHAIN COMPANY, Inc., Dept. 485, 402 Kentucky Avenue, Indianapolis 7, Indiana. Tulsa Office: 2238 Terwilleger Blvd.

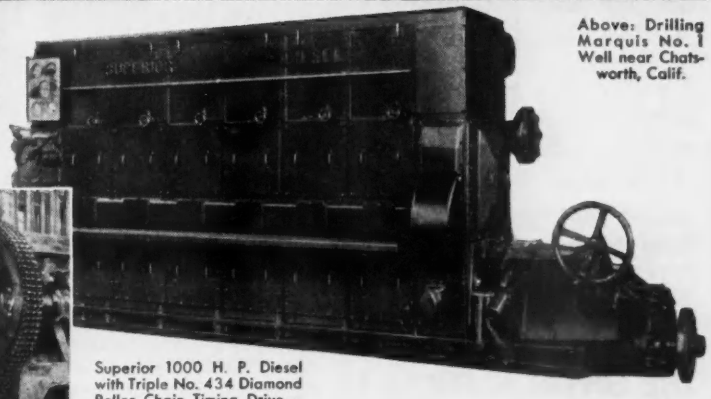
DIAMOND  **ROLLER CHAINS**



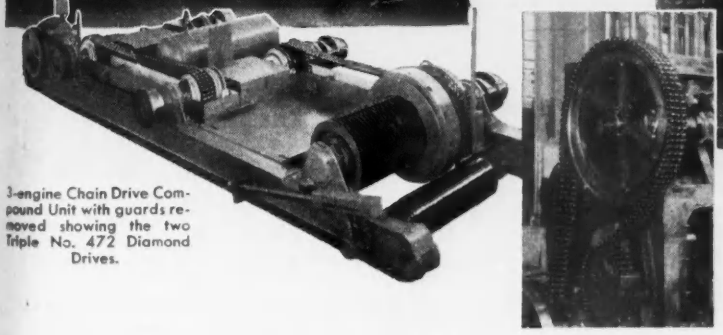
Above: Drilling Marquis No. 1 Well near Chatsworth, Calif.



4-engine Ideal Consolidated 125 Drilling Rig with enclosed oil-bath Triple No. 472 Diamond Roller Chain Drive Compound Unit. The engines shown have Diamond Timing Drives.

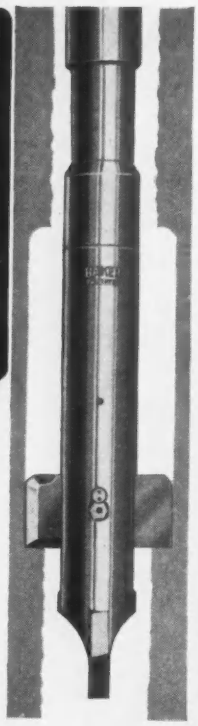


Superior 1000 H. P. Diesel with Triple No. 434 Diamond Roller Chain Timing Drive—crankshaft to camshaft.



3-engine Chain Drive Compound Unit with guards removed showing the two Triple No. 472 Diamond Drives.

IF YOU WANT TO KEEP OUT OF *Scrapes*



...get a BAKER WALL SCRAPER on the job! It will enlarge the hole, or just scrape off the "cake" whichever you want. Blades open positively — do their stuff — and then close to come safely out of the hole. It's easy to run.

BAKER *Rotary* WALL SCRAPER

ASK THE *BAKER* MAN

FITLER LUBRICORE

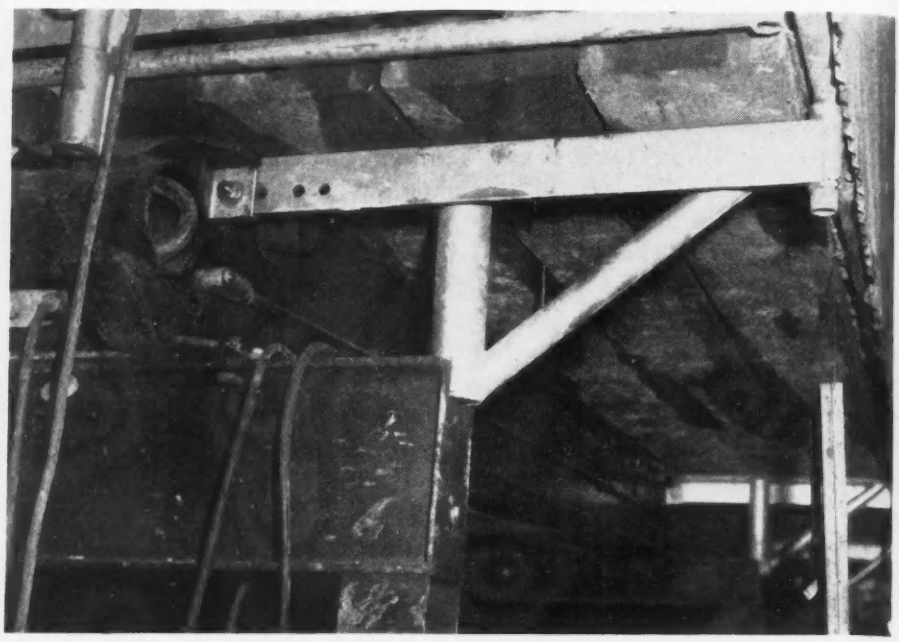
There is but one genuine "LUBRICORE" Self-Lubricating Rope made and placed on the market by FITLER, patented by FITLER and easily identified as a FITLER product by the Self-Lubricating "Green Yarn Center."

Insist on "LUBRICORE" — Beware of imitations — Don't accept substitutes. Ask for "LUBRICORE," the Self-Lubricating Green Yarn Center Pure Manila Rope made by FITLER.

★

THE EDWIN H. FITLER CO.
PHILADELPHIA, PA.
Manufacturers of Quality Rope
Since 1804

Arm Supports Provide Additional Floor Space



RIG FLOOR SUPPORTS

Gain of at least three extra feet of enclosed floor space surrounding the drilling engine and other equipment on their portable drilling rig is made possible in an economical manner by one drilling company. Unitized arms which are easily made up in the shop are installed at regular intervals around the side of the rig floor, being supported on the elevated framework atop which rests the skid base of the power equipment. Each arm consists of a horizontal 40-inch length of 4x6-inch angle which is welded across the upper ends of (1) a vertical 16-inch piece of three-inch pipe, and (2) a 26-inch angle brace of two-inch pipe. The vertical member, which has its lower end notched, rests on one of the H-beam columns supporting the skid base machinery mounts. The inner end of the angle is bolted to an angle clip welded to the side of the I-beam skid, and the outer end, to which a socket of 1½-inch pipe is welded, provides support for the unitized siding panels.

These supports are easily made of scrap materials, and contribute considerably toward facilitating rigging-up as well as simplifying provision of added floor area around the equipment.

Tires on Portable Rig Protected by Sheet Iron Hoods

EQUIPMENT CARE

Protection of rubber tires on which the portable drilling rig is mounted is accomplished in a simple manner by one oil company. Normally exposed to ruinous splashes of crude as well as chemically treated mud and lubricating oil drippings, the tires now are covered at each setup with light gauge sheet iron hoods. The covers are wide enough to cover the dual treads and are equipped with handles to facilitate their handling at each job. Such covers are relatively inexpensive, are easily nested for handling or storing between wells, and with reasonable care will last for an indefinite period. In proportion to the degree to which life of the tires is extended, the cost of such covers is negligible.

Men who know OIL

. . . Can Best Help You With Your Oil Financing!

We know oil and oil production . . . and we have the facilities to go with that knowledge in helping you with your oil financing problems.

1st NATIONAL

First National Bank
in Dallas

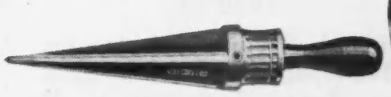
MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

Fast, safe LONG TAPER PIPE REAMING

RIDGID
Extra-long-taper reamer saves you time, work ...and pipe

● Now you can ream pipe or conduit easily and quickly without risk of thinning, flaring or splitting it. Extra long taper of this RIDGID Reamer whisks burr out safely in a few feather-light ratcheted strokes. Comes complete with ratchet handle. Save effort (and pipe) — buy it at your Supply House.

Reamer unit fits RIDGID No. 00R Ratchet Threader Handle, also.



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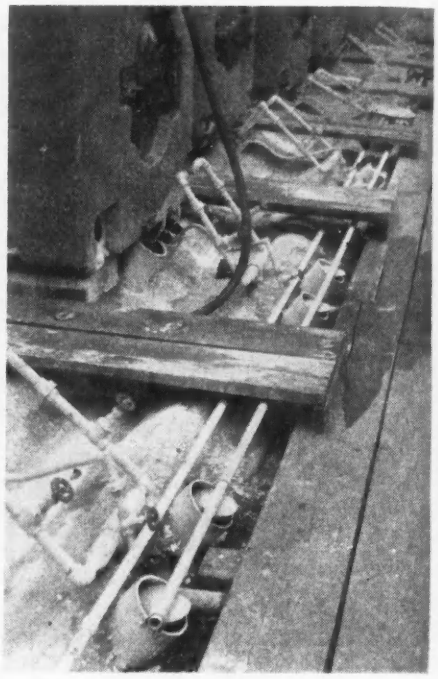


Unitized regulation of the draft on a 6-unit battery of high pressure boilers is accomplished in a novel manner by the drilling department of one company. Dual intake pipes set at an angle as shown were provided with butterfly-type valve discs, the latter being operated by a length of light pipe welded across each of them and which extends the length of the battery.

BOILER OPERATION

Loops of light steel rod and welded to the sides of the intake pipes provide a means of holding the control line in proper position across the row of valves. Since the boilers in this battery are identical, draft regulation will be approximately the same, permitting simplified control from a single point merely by rotating the control pipe slightly.

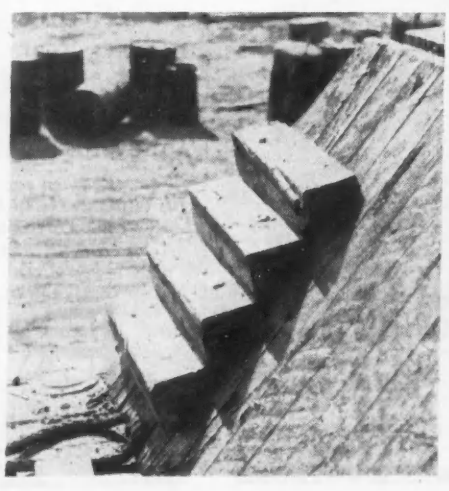
$5.00 is paid for each illustrated acceptable contribution. Mail to The Editor, THE OIL WEEKLY, P. O. Box 2608, Houston 1, Texas

Removable Steps May Be Placed Where Needed

In a move to save extra walking around the rig caused by the existence of a steep ramp on the pipe rack side of the rig, one company makes a practice of providing an extra set of small portable steps which may be attached to any position on the ramp, as shown. Doing away with the necessity of building a recessed series of steps in the ramp each time the rig is set up at a new location, this four-step unit is easy to make and requires no special provisions for mounting wherever desired.

RIG WALKWAYS

The unit, while not as complete as regulation steps, nevertheless does provide a means of quickly getting up or down between the floor and rack at a point on the rig where normally no steps are placed. Such a system would be the solution to certain slim-hole rigs where no steps are provided for the ramp side and it is necessary to either slide down the ramp or make a detoured trip to another side of the rig.



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THE WEEK'S NEWS

THE War Assets Administration will open its bids—10 or 12 firm offers expected—on the Big Inch pipe line today, with the likelihood of congressional interference to their conversion to natural gas apparently dissipated by refusal of Senate and House committees to approve legislation holding up disposal. Page 260.

Rubber Act Extension—President Truman has asked Congress to continue certain titles of the Second War Powers Act, including allocation control over rubber, for another year, warning of possibilites of a new emergency which might make application of government authorities essential.

Anglo-American Oil Pact—Early consideration before the Senate Foreign Relations Committee now appears probable for the proposed Anglo-American oil pact. Story below.

Oil Industry Publicity—District organizations are being set up for the nationwide publicity effort dealing with the petroleum industry. Page 254.

Tariff Problem—The GOP leadership in Congress, worried by rank-and-file rebellion against the proposed 18-nation reciprocal trade agreement, is seeking a middle ground of protection for American industry which will avert legislation until the question of extending the enabling law comes up next year. Indications are that widespread opposition will be offered to the charter for an International Trade Organization at hearings opening late this month.

ILO Meeting—Preliminaries were finished by the Petroleum Industry Committee of ILO at its meeting in Los Angeles last week, with the important proceedings expected this week. Page 258.

Middle East Oil Deal—Senator Joseph C. O'Mahoney is attempting to build up a congressional investigation of Arabian-American Oil Company's arrangement with Standard Oil Company (New Jersey) and Socony-Vacuum Oil Company, in which he sees a renascence of the old Standard Oil trust. Page 262.

World Oil Statistics—OGD Director Max Ball is compiling a list of statistical needs so as to formulate plans for gathering world-wide data on petroleum as requested by NPC. Page 256.

New "Deepest" Well—Oklahoma has lifted from California the distinction of having within its borders the world's deepest oil well. It is The Superior Oil Company of California's Weller 51-11 which reported a depth of 16,691 feet Friday. Story below.

Shale Mining Developments—The Bureau of Mines reports that investigation indicates the Colorado oil-shale beds may return even more synthetic fuel than estimated and announces progress toward development of methods of low-cost synthetic oil production. Page 254.

Early Committee Consideration Likely For Anglo-American Petroleum Pact

Possibilities that the Senate Foreign Relations Committee finally will take up the long-stalled Anglo-American petroleum agreement are seen in the announcement by Chairman Arthur H. Vandenberg that ranking minority member, Senator Tom Connally, will not accompany Secretary of State Marshall to Moscow next month.

Both the new Secretary of State and his No. 1 aide, Undersecretary William L. Clayton, have had discussions with committee members regarding the slate of diplomatic matters, in the course of which the oil agreement is understood to have come up for review.

When committee hearings open, State Department representatives are expected to dispose of apprehensions that the agreement with Britain is the initial step in a plan to develop a world-wide oil pact under the aegis of the United Nations.

Instead, they will say that no steps toward expanding the agreement should be taken until experience shows how the bi-lateral arrangement works out.

While there are some in the State Department who are pressing for an immediate multi-lateral agreement, more realistic officials, fortunately nearer the top, believe that problems inherent in the British treaty should be ironed out before its scope is broadened.

It is highly important, they say, that the proposed International Commission be properly constituted. Needed for that body, it was explained, are men of broad actual experience in the petroleum industry who have not, at least recently, been connected with a major company, who know how to deal diplomatically with officials, preferably men with some knowledge of departmental procedures and one, at least, with a knowledge of international law. It will be very difficult, it is admitted, to find men with these qualifications who will accept appointment to the commission.

Not only is it felt it would be unwise to develop a multi-lateral agreement until there has been experience under the British arrangement, but it is recognized that any move which would place international oil under the jurisdiction, even in a merely advisory capacity, of the United Nations' organization would be strongly opposed by the industry. This opposition was made manifest last summer following a broadcast on oil by department petroleum officials which suggested a world agreement supervised by the Economic and Social Council, and the Foreign Relations Committee is expected to go into this angle during its hearings.

As a matter of fact, even if the State Department wanted to undertake negotiations of a world agreement, there is considerable question whether Britain would go along. In the negotiations on the original agreement in 1944, the American delegation was anxious to have it a multi-lateral arrangement immediately, but finally was convinced by the British group that it would be better if the two countries with the largest interests worked out the basic agreement first.

Depth Record

The Superior Oil Company of California has broken all drilling depth records with its Weller 51-11, in Caddo County, Oklahoma, near Fort Cobb. The wildcat, in NW NW NE 11-8n-12w, reached a total depth of 16,691 feet in the Pennsylvanian on February 7 before being shut down to repair a broken clutch.

Drilling operations are to resume as soon as the damage is repaired, and company officials indicate the well will be taken down to 17,000 feet.

The depth record previously was held by Pacific Western Oil Company's National Royalties 1, in Kern County, California, which is bottomed at 16,677 feet.

(See page 271 for further details)

Lone Star Extension

A Texas Railroad Commission order issued January 4 which permits Lone Star Gas Company to produce 60 million cubic feet of gas daily above January allowables from its connections in the Carthage field, Panola County, was extended Friday until February 20. An emergency still exists for additional gas to supply the Big Inch, the order recites.

Commissioner Olin Culberson was opposed to extension of the order on the ground that it is discriminatory as between producers in a common reservoir.

Commissioner Murray, a new commissioner, signed the order "until such time as I may be able to obtain information which will allow me to determine whether an emergency exists necessitating continuance of this order."

Oklahoma Votes Extension Of Oil Compact Agreement

Oklahoma became the first state to execute extension of the Interstate Compact to conserve oil and gas when Governor Roy J. Turner signed the four-year extension agreement, after the Compact Commission's executive committee meeting in Oklahoma City February 1 had voted to ask for such extension in all states.

The compact expires on September 1, 1947, but the governors of all compact member states except four—Texas, Kansas, Illinois and Michigan—have the authority to extend. It was reported that bills already have been introduced or are ready for introduction in these four.

A division to study and promote secondary recovery research will be set up in the commission's headquarters office, the executive committee voted with $15,000 allocated for the work.

A special stripper well committee will be appointed by Chairman Hiram Dow after consultation with governors of compacting states and others interested in the subject.

Next quarterly meeting of the commission will be held the middle of April, place to be decided.

New Formula Is Adopted For Rangely Field Output

Commencing February 1 a revised type proration for the Rangely field, Colorado, was made effective by Stanolind Pipe Line Company, purchaser of all crude run from the field by pipe line. The majority of operators in the field favored a proration based on engineering recommendations, rather than a prorated amount for each well in the field.

There is only one pipe line from the field, the Utah Oil & Refining Company (Standard of Indiana subsidiary) 10-inch line to Wamsutter, Wyoming, and during January each field well completed was allowed 135 barrels daily run by Stanolind as purchaser. The new formula established by the Field Operators Engineering Sub-Committee is based upon the acreage factor per well, gas-oil ratio and bottom-hole pressure. Several of the operators have objected to purchases on the new basis.

Total field production of Weber sand oil will remain at around 26,000 barrels daily.

Magnetometer Is Released For General Industry Use

The "flying magnetometer" (THE OIL WEEKLY, June 30, 1946) now may be manufactured for public sale, subject only to patent restrictions, as far as the Navy is concerned, Senator Moore of Oklahoma has been informed by John Nicholas Brown, the Navy's assistant secretary for air.

The Navy, which used magnetic airborne detection equipment to locate enemy submarines, acted on the request by Senator Moore that wartime restrictions be lifted so that the system could be made generally available for oil exploration.

Oil For Defense

By RAY L. DUDLEY

THE Senate Special Petroleum Committee has taken a two year dive into oil and has come to the surface with the relieving assertion that the country needn't worry about running out of oil but that the USA would be in a devil of a shape if it had to fight a big war on its own domestic supply.

So it would.

So it would have been in World War I when Mexico furnished great help. So it would have been in World War II when Venezuela and the Middle East contributed substantially, as well as Colombia and Trinidad and other countries.

We agree with the committee that the subject of a war supply for the USA should occasion sober thinking.

THE OIL WEEKLY has joined with many others in saying many times that one of our major concerns in the event of another war will be oil because we just cannot accept the theory that a few well-placed bombs will destroy the American spirit to fight back, even if those first bombs are directed toward us in the first days of the war, rather than by us.

Don't forget that we will have some bombs, too, and that we are not likely to be so crazy as to locate their directing platforms in the heart of New York or any other important city. So when the first orgy of wholesale murder and destruction on both sides is over fighting will fall back on the more old fashioned procedures of warfare — and oil will be of vital necessity.

We, by all means, should make as sure as possible that we shall have an adequate supply of petroleum for national and hemispheric defense.

How, then, to get it?

Needed Oil Supply

Two ways suggest themselves to our thinking:

1. Help to maintain a healthy oil industry here within the United States. (Remember that, despite the aid which the Allies had from South American and Middle East oil resources during the recent war, the supply would have fallen far short had not the American oil industry been in shape to carry most of the burden.) This healthy condition cannot be achieved by destroying our domestic industry through importing a flood of foreign oil, nor can it be done by gutting our supply of domestic oil through failure to recognize the wisdom of reasonable imports. We believe that the Congress, be it Republican or Democratic in color, will follow a reasonable line, somewhere between the ideas of those who want no imports and the ideas of a company which would like to import ALL of its crude oil. A healthy condition means, not a subsidized condition, but a condition free from prosecution for the sake of persecution.

2. Encourage the development of reserves in areas which can be defended. The United States is committed to a policy of assisting its sister republics in the Western Hemisphere in the event of aggression. And it can assist them very effectively. Consequently we believe that the State Department should keep its ears to the ground, particularly in South America.

Latin America Encouragement

Encouragement of fair dealings and fair treatment in Latin America should be the watchword of our State Department. The oil industry asks for nothing more. If the accredited representative of a nation holding ideologies contrary to ours, and with an attitude toward western civilization which gives great cause for distrust, attempts to influence the thinking of a South American republic against the United States, we think that the State Department should do more about it than the State Department has done in such an instance recently. (If the State Department doesn't know what we're talking about, we'll be glad to enlighten it.)

The foregoing does not mean that we believe that Middle East oil or the efforts of American companies in that area be ignored or discouraged. On the contrary, as an ultimate peacetime supply the Middle East will play an important part in American commercial life. American companies there appear to be handling their affairs in a satisfactory manner, and should not be handicapped by any ill-conceived notion on the part of our government that development of petroleum in Iran, Iraq, Saudi Arabia, Kuwait, etc., under present ownerships will destroy the domestic industry. The domestic industry could much more easily be destroyed if that oil were in the hands of nationals other than American or British-Dutch, who also hold great investments here within the United States.

We have been interested in the prophecy handed as propaganda to the Russian people by their own governmental propagandists to the effect that America is on the brink of an economic collapse. Over here we call 'em "depressions" or "recessions." In Russia apparently they are called "Five Year Plans"!

Editorial Index to 1946 Issues Now Available

The complete editorial index covering all issues of THE OIL WEEKLY published during the year 1946 has been prepared and is bound separately in convenient pamphlet form. It will be sent without charge, of course, to all subscribers who need and request copies.

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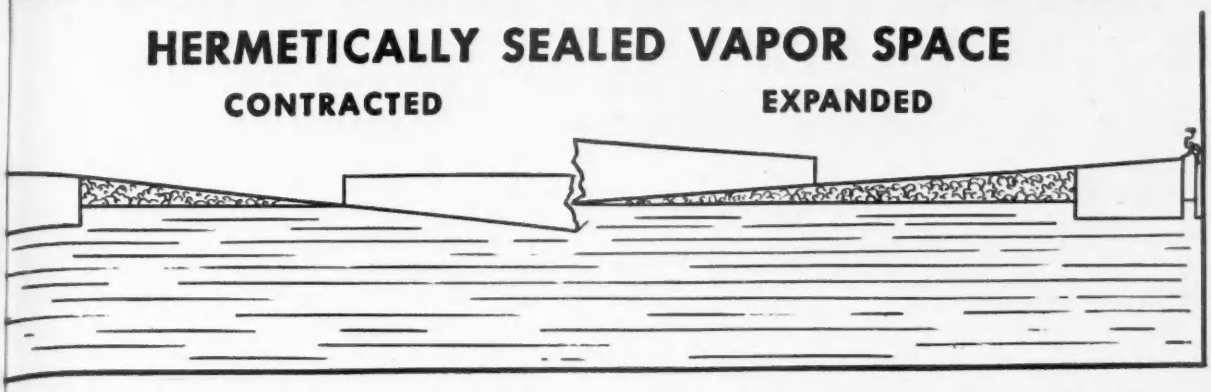

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Krug Reports Progress in Oil Shale Work and Coal Hydrogenation Methods

Our oil shale reserves are proving richer than originally estimated and new methods and equipment for converting them into oil give promise of eventual development of a process which will bring the cost of synthetic gasoline considerably closer to that of the refinery product.

Although retarded by war-created shortages of materials, the Bureau of Mines program for development of commercial methods of producing synthetic fuels from shale, coal and other materials, under the O'Mahoney Act of 1944, has made considerable progress. Currently it is estimated that gasoline can be produced from oil shale or coal at a cost of 7.5 to 9.5 cents a gallon, but without including profit or interest on investment. If the bureau can develop a method which will shave another few cents off that cost, the way will be clear for development of a new synthetic-oil industry which gradually may take over the job of supplying our petroleum needs when and if demands outstrips natural productive capacity.

Colorado Figures Revised

That the shale resources of the country give promise of supplying more than the original estimate of 92 billion barrels of recoverable oil, is revealed by core drilling in western Colorado which indicate that some 15 billion barrels of oil may be recovered from Naval Oil Shale Reserve No. 1 alone, an area of 44,560 acres. Two other reserves in that state comprise another 128,944 acres.

By the end of 1946, construction of three of the four major installations planned by the bureau had been completed, and contracts let for the fourth, which may go into operation early in 1948.

Laboratory and pilot plant studies at Laramie, Wyo., developed a thermal solution process, which employs hot solvents to extract oil from the shale, which gave oil recoveries greater than the assay value of the shale, and thermal cracking studies on shale oil fractions are nearing completion and investigation of catalytic treating methods is under way. Researchers also are studying the by-product potentialities of oil shale.

At Rifle, Colo., the oil shale demonstration plant soon will be put into operation, and the bureau will test out its newly developed equipment and methods under conditions simulating those which would exist in industrial operation. Similarly, it will make a commercial-scale test of shale mining methods, and a mine is being opened in which the shale will be quarried with electric shovels and diesel trucks operating underground. This method may reduce mining costs to approximately 50 cents a ton.

The bureau also has developed a new drill bit that will cut through 100 to 200 feet of shale without material loss of driling speed, compared to the maximum of 10 to 20 feet obtained before standard bits become dull.

Coal Synthesis Progress

Marked progress also has been made in the synthesis of coal, and in the hydrogenation process lower pressures and lighter equipment have been indicated as contributing importantly to reduction of production cost. Through use of a new type of reaction chamber embodying improved cooling methods, production rates more than double those of European plants have been attained. In Alabama, practicability of producing gas by burning coal in the ground is being tested, this along lines developed in Russia where it is planned to produce 920 million cubic meters of fuel gas annually by 1950 in this way.

Commenting on the progress of the program in the annual report of Secretary of the Interior J. A. Krug, Dr. R. R. Sayers, director of the bureau, predicted that production of synthetic petroleum products on a commercial basis is possible within a few years.

Crude petroleum production in 1946 is estimated at a new high of 1731 million barrels, an increase of 1.2 percent over 1945, said Krug, and he foresaw that future demand would increase at a rate with which industry likely could not keep pace.

Krug, however, did not put forth synthetic oil products as an immediate answer, pointing out that the replacement of any considerable crude production will require many years. But because of the time required to get a synthetic industry under way, he said, the development work on which it will be based must not be delayed until a fuel crisis is imminent.

Two-Dollar Price Asked By Group of Associations

An increase in the price of crude oil in the Southwest and Mid-Continent areas to an average of $2 per barrel was requested in a statement issued by members of nine oil and gas associations following a meeting in Fort Worth. The request was forwarded to major oil company purchasers. J. P. Coleman, Wichita Falls, president of the North Texas Oil and Gas Association, called the meeting.

The statement declared that "if the independent producers are to do their share in maintaining discoveries, they must have a reasonable price for their crude oil."

Associations sending representatives to the meeting included East Texas Oil Association, Oklahoma Stripper Well Association, Kansas Independent Oil and Gas Association, West Central Texas Oil and Gas Association, Panhandle Producers and Royalty Owners Association, Southern Arkansas Stripper Well Association, Texas Independent Producers and Royalty Owners Association, New Mexico Oil and Gas Association and the North Texas group.

Supervising Group Named For Eight-State Publicity

Plans for a public relations program for the oil country were made by Petroleum industry leaders in Dallas last week when Fred F. Murray of Dallas was elected district chairman.

Forming itself into a permanent supervising group, the organizing committee divided the eight states of its district into three areas, and elected chairmen and vice-chairmen as follows:

Area 1, Texas and New Mexico: J. Ed Warren of Midland, chairman; Hiram M. Dow of Roswell, N. M., Warren L. Baker of Houston and John P. Morgan of Dallas, vice-chairmen.

Area 2, Oklahoma and Kansas: Condon McKay of Tulsa, Chairman; C. O. Willson of Tulsa and Lloyd Pickrell and Curtis Henderson of Wichita, Kan., vice-chairmen.

Area 3, Louisiana, Arkansas, Mississippi and Alabama: W. M. Vaughey of Jackson, chairman; N. H. Wheless of Shreveport, La., T. M. Martin of El Dorado, Ark., and James E. Duffy of Grove Hill, Ala., vice-chairmen.

Murray, president of Oil Well Supply Company, was authorized to name an executive committee.

The district committee will follow the general plan of organization outlined by John M. Lovejoy of New York, chairman of the American Petroleum Institute public relations committee, and Keeton Arnett of New York, vice president of the Fred Eldean organization, which is handling the program.

A public relations program by independent producers, refiners and marketers, as well as major oil companies, to use all means of telling the story of oil as a progressive industry, was outlined by Jake L. Hamon, temporary chairman, and others.

District 2 Organized

Organization of District 2 into small units to administer oil's new public relations program resulted in establishment of four areas with temporary organizing chairmen as follows: Tennessee, Ohio, and Kentucky, Eric V. Weber, Cincinnati; North Dakota, South Dakota, and Minnesota, Norman B. Curtice, Minneapolis; Nebraska, Iowa, and Missouri, E. Dale Smart, Omaha; and Michigan, Indiana, Illinois and Wisconsin, L. S. Wescoat.

Kansas and Oklahoma have been placed in District 3 for purposes of organization, the group meeting at Chicago last week recommended that those two states be placed back in PAW District 2 for purposes of operation.

The organizing committee for District 2 is headed by L. S. Wescoat.

Publicity Program OK'd

Unanimous approval of the industry-wide public relations program sponsored by the American Petroleum Institute has been voted by the Independent Oilmen's Association of New England. The group pledged support of its members in the program which is now in its organizational stages.

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Secretary Krug Busy with Groundwork For World-Wide Oil Statistical Task

Representatives of the various departments comprising the OGD inter-agency committee have been asked by Director Max W. Ball to catalog fully their needs for data on oil and gas so that, when the National Petroleum Council committee presents a similar list of industry desires, it will be possible to develop specifically the factual material which the government should gather.

Once the statistical requirements are developed, Ball explained, consideration can be given as to the most economical, efficient and expeditious manner in which it can be handled, possibly by a single agency. No thought has been given as yet to the agency which should carry on the work, he said.

The inter-agency committee is meeting weekly, and probably will have a comprehensive listing of the needs of the various agencies at its next meeting. The NPC committee will meet in the near future, at which time its requirements will be correlated with those of the government.

Believing that the development of adequate statistics is a prime requisite for all of the activities of the OGD, Ball is pressing the matter. At the same time, he is whipping into shape other parts of the program laid down at the council meeting last month, and already has talked with one member of the Interstate Oil Compact Commission regarding closer cooperation between the two agencies for the improvement of conservation practices in the fields of both oil and gas.

"Lobbyists" File

First filings from the oil industry under the law requiring registration of lobbyists were reported last week.

Four registrations have been received from representatives of Arabian-American Oil Company, Newell W. Ellison, Donald Hiss and Paul E. Shore of Washington, and John O'Brien of New York, in each case, the duration of the employment was said to be indefinite, with fees for personal services and expenses yet to be determined.

U. S. Crude Oil Production

(Estimates compiled by THE OIL WEEKLY. All figures indicate daily averages in barrels.)

STATE OR DISTRICT	PRODUCTION IN WEEK ENDED February 8	February 1
Alabama	850	900
Arkansas	73,000	72,400
California	885,200	883,200
Colorado	35,300	37,450
Florida	245	245
Illinois	197,800	195,900
Indiana	17,500	18,000
Kansas	276,500	284,700
Kentucky	27,700	27,750
Louisiana	404,950	408,725
North Louisiana	94,650	95,100
South Louisiana	310,300	313,625
Michigan	43,750	45,000
Mississippi	90,600	87,550
Missouri	100	100
Montana	20,700	20,500
Nebraska	700	700
New Mexico	103,900	103,500
New York	14,300	13,100
Ohio	8,600	8,100
Oklahoma	367,950	365,150
Pennsylvania	37,700	34,400
Tennessee	35	35
Texas	2,056,665	1,931,615
Tex. R. R. Com. Districts:		
Dist. 1—S. Central	19,950	19,085
Dist. 2—Lwr. Gulf Coast	146,025	133,110
Dist. 3—Upr. Gulf Coast	451,000	412,175
Dist. 4—S. West	223,250	206,525
Dist. 5—E. Central	36,440	33,700
Dist. 6—E. Texas Field	328,200	301,000
Dist. 6—Rest of N. East	106,100	99,435
Dist. 7-B—W. Central	36,100	34,000
Dist. 7-C—West	32,665	27,585
Dist. 8—West	467,455	464,725
Dist. 9—N. Central	126,355	118,225
Dist. 10—Panhandle	83,125	82,050
West Virginia	7,750	7,700
Wyoming	105,000	107,000
Total United States	4,776,795	4,653,720

Total stocks, foreign and domestic, February 1, as reported by the Bureau of Mines were 223,727,000 barrels.

Fleming and Associates Sell East Texas Property

Fleming Oil Company and associates have contracted for the sale of their 131 wells on 26 leases in the East Texas field to Nassau Associates, Inc., of New York, and J. G. Puterbaugh of McAlester, Oklahoma, according to William Fleming, president.

This deal is the largest of many property transfers involving acreage in the giant field, and was handled by representatives of Dillon & Reed, New York firm that recently contracted to pay between $5 and $6 million to George Strake, Houston, for his interest in 45 wells on six leases in the Conroe field for the account of eastern insurance companies. Puterbaugh is president of McAlester Production Corporation, which supervises or assumes active management of oil properties acquired by the New York banking firm.

AAPG Executives to Take Office After Coast Session

New officers of the American Association of Petroleum Geologists will take office following the annual meeting of the association in Los Angeles, March 24-27. They are C. E. Dobbin, regional geologist of the U. S. Geological Survey, Denver, president; George S. Buchanan, division manager, Sohio Petroleum Company, Houston, vice president; J. V. Howell, consulting geologist, Tulsa, secretary-treasurer, and C. L. Moody, division geologist, The Ohio Oil Company, Shreveport, editor.

Election of officers was completed January 31.

Oil Refinery Equipment For Russia Is Held Up

Shipment to Russia of more than $25 million worth of supplies, including oil refining equipment to the extent of $12.5 million has been held up by the Senate Appropriations Committee, to which the matter was referred after State Department officials and Comptroller General Lindsay Warren disagreed as to whether the shipment would cut across the provisions of the act liquidating lend-lease.

In asking Warren to say whether he thought the U. S. should ship the goods to Russia, the committee was motivated by the fact that the Soviet has made no response to repeated suggestions to set a date for discussion of the settlement of the $11 billion worth of materials and supplies shipped during the war under lend-lease, although other lend-lease recipients have long since negotiated a settlement of their accounts.

The goods that are held up were ordered before the end of lend-lease and Russia paid for them when the end of the program also ended its credit.

Law Lectures Offered

The 12th annual series of lectures on the law of oil and gas will be presented February 13 to May 29 in the Houston Y. M. C. A. building by the South Texas College of Law of the Young Men's Christian Association.

The 16 lectures, to be given each Thursday night are to be presented in language clearly understandable to laymen. Additional information on the course may be obtained from South Texas College of Law, Young Men's Christian Association, Houston.

Louisiana Allowable

The Louisiana Conservation Commission has set the February daily oil allowable at 446,909 barrels, an increase of 483 barrels over December. The Monroe district was increased 1590 barrels daily to a new total of 67,652 and the New Orleans district was cut 1308 barrels daily to 92,005. Other district totals were: Houma 64,478; Lafayette 120,574; Lake Charles 65,877; and Shreveport 36,323.

Durham Appointed

Grady C. Durham of New Orleans has been appointed as the new attorney for the Louisiana Conservation Department succeeding Hale Boggs who has been elected to Congress.

Oil Workers Strike Threat

An industry-wide strike against major oil companies was threatened last week by officials of the CIO International Oil Workers Union unless steps are taken by February 15 to grant demands of workers for a 25-cents-an-hour wage increase.

The threat was made in a statement by union President O. A. Knight issued at the end of a two-day strategy conference in Fort Worth which assured major oil firms of giving the union "the run-around" in negotiations.

IPAA Hears Statement of Problems Facing Industry

The encroachment of the Federal Power Commission on free enterprise and mounting oil imports were hard hit by Major B. A. Hardey, president of the Independent Petroleum Association of America at the associations executive committee meeting in Los Angeles on January 31.

Hardey said the FPC is a "real threat" and may be the vehicle for federal control of the oil industry. He said that many oil men were complacent about the plans of those who would use the commission for that purpose.

On oil imports, Hardey said: "We are going to raise hell if too much oil is imported into this country and stagnates the domestic industry." He declared the IPAA was for an imports program that would encourage the domestic oil industry to engage in a vigorous exploration program for oil within the U. S. and prevent the premature abandonment of present reserves now being produced from stripper wells.

Hardey said the association had before it at least three well-defined major problems which would be closely watched and dealt with with utmost vigor. These are: 1) Maintenance of state sovereignty as distinguished from bureaucratic control in ownership and operative control of minerals underlying submerged lands, and control of production of oil and gas free from FPC or any government bureau; 2) setting up of an import program that will encourage domestic industry to maintain a vigorous exploratory program and at the same time prevent premature abandonment of stripper well reserves; and 3) keeping a watchful eye on tax legislation to prevent tampering with existing depletion of allowances and deduction of intangible drilling costs.

Walter S. Hallanan, chairman of the National Petroleum Council said the industry had "everything to gain and little to lose" by supporting the council. Hallanan, while saying that free enterprise would be preserved, added that "we must not blind ourselves to the realities of a vastly changed economic order throughout the world."

The association's supply and demand committee estimated that 4,415,000 barrels daily of domestic crude oil would be required for the first quarter of 1947 and 4,540,000 barrels daily for the second quarter. These estimates average about 4,480,000 barrels daily for the six-months period as compared with an actual output of 4,680,000 barrels daily for the same period in 1946.

The committee strongly urged the Interstate Oil Compact Commission and the state regulatory agencies give prompt consideration to the necessity for reducing production within the limits of consumptive demand and avoiding wasteful stocks during first half of 1947.

Oklahoma Scouts Elect

New officers of the Southern Oklahoma Oil Scouts include J. E. Rogers, Stanolind Oil & Gas Company, Oklahoma City, czar; C. A. Patchin, Anderson-Prichard Oil Corporation, Oklahoma City, vice czar, and Ralph Cadenhead, Magnolia Petroleum Company, Ardmore, secretary-treasurer. The group voted to move the weekly check meeting from Ardmore to Duncan.

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WAA To Open Big Inch Bids Today; Cold Weather Affects Gas Movement

Refusal of congressional committees last week to act on resolutions which would halt the sale of the Big Inch pipe lines appears to have been eliminated, the last impediment to conversion of the systems to natural gas. Bids will be opened today by the War Assets Administration which is expecting 10 or 12 "firm offers."

The Senate Armed Services Committee refused after four meetings to modify its position refusing to delay the sale of the lines. On the House side, the Interstate and Foreign Commerce Committee did not act on the resolutions before it because of the situation in the Senate, and when the Senate committee refused to move, Chairman Charles A. Walverton pointed out there was no use going any further because any resolution to delay the sale would have to be approved by both houses.

As the situation now stands, the WAA can sell the lines for such use as the purchaser may elect to make of them and if, as anticipated, they are bought for natural gas use, the fight will shift to the Federal Power Commission and the courts, where Pennsylvania authorities have said they will vigorously defend the restrictions in their easements prohibiting use of the lines for natural gas.

TGT's New Troubles

A new allocation of the gas moving through the Big Inch lines during February under the temporary lease held by Tennessee Gas and Transmission Company was ordered by FPC following a meeting January 31 of the industry advisory committee which voted against any changes.

At that meeting it was developed that Tennessee is experiencing difficulty from the formation of hydrates as a result of low temperature effect on moisture in the lines and could not materially increase the pressure in the lines so long as that condition exists.

A peculiar situation has arisen whereby the supply of gas through the Big Inch pipe lines may determine how much steel pipe can be produced for construction of other pipe lines. "If increasing quantities of gas are delivered into the Appalachian area from the Big Inch and Little Big Inch pipe lines," the committee said, "the distributors of gas in that area will be in a position to supply a greater percentage of the steel industry's fuel requirements, which will result in a larger output of pipe by them, which will, in time, also help to alleviate the gas shortage situation."

Tennessee expects to move an average of 115 million cubic feet of gas daily through the lines this month and the FPC allocation, effective tomorrow, provides that Panhandle-Eastern Pipe Line Company shall receive 20 million feet, Louisville Gas and Electric Company, 1.5 million feet, Carnegie Natural Gas Company, 1.5 million feet, and the balance shall be apportioned 47 percent to Columbia Gas and Electric Corporation, 33 percent to Consolidated Natural Gas Company, and 10 percent, each, to National Fuel Gas Company and Equitable Gas Company.

Expansion of Facilities In Michigan Area Asked

Michigan Consolidated Gas Company has applied for FPC authority to install additional facilities in the Austin and Reed City gas fields near Big Rapids, Mich., at an estimated cost of $1,572,450, the first step in Michigan-Wisconsin Pipe Line Company's project for construction of a natural gas pipe line from the Hugoton field to the Middle West.

The pipe line will run into several

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operating districts of Michigan Consolidated, which serves Detroit, Ann Arbor, Grand Rapids and other large communities, and the plan calls for the leasing and subsequent purchase of the two gas fields upon completion of the line, for use as storage fields.

Shell Eliminates Curtailed West Texas Crude Purchases

Curtailed crude purchases by Shell Oil Company in four West Texas deep oil fields have been eliminated through reduced allowables given the district effective February 1 and through the sale of 30,000 barrels of excess stocks of Ellenburger crude to Magnolia Petroleum Company.

Shell restricted its production and purchases to 72 percent of the allowable of the Monahans, Wheeler, TXL and Bedford fields, all served exclusively by Shell Pipe Line Corporation, during November and December. Runs were increased to within 10 percent of the allowable during January through relief gained from other buyers and reduced allowables, but this cut was cancelled late in January. Pipe line proration was made necessary due to Shell's line being unable to accommodate all connections.

Shell's Permian Basin system is serving more leases than any other carrier. The company is moving 85,000 barrels daily through its two 10-inch trunk lines, and is scheduled to supply 18,200 barrels daily to Stanolind's 16-inch carrier to Cushing, Okla., but 11,200 barrels daily of this movement during February will re-enter Shell's system at Cushing. Shell will sell 12,000 barrels daily of Ellenburger oil to Magnolia; 5000 barrels daily of Ellenburger oil to Gulf; 3000 barrels daily of Ellenburger oil to Atlantic; and 4500 barrels of Devonian oil to Cities Service. The latter oil will move to the coast through The Texas-New Mexico Pipe Line Company's system.

Sun Starts Terminal

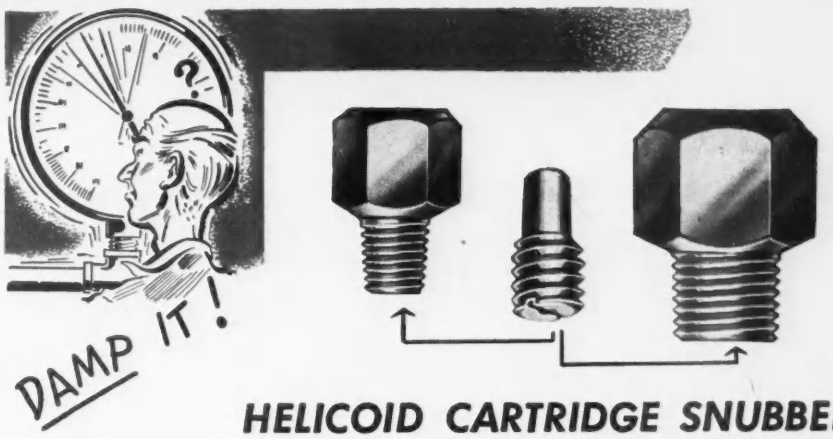
Sun Oil Company has started construction of a tank farm and marine terminal at Ingleside, near Corpus Christi, for the loading of tankers and barges with oil handled by the Sun Pipe Line Company's trunk line system in the Lower Gulf Coast and Southwest Texas areas. Sun is using the facilities of other terminal operators, but is scheduled to be prepared to make its own loadings by next fall. The crude storage facilities will include seven 131,000-barrel capacity tanks.

Mississippi Line Finished

Construction on Southern Natural Gas Company's new 80-mile natural gas line extending from present facilities at Pickens, Miss., to the Gwinville field, Jeff Davis County, Mississippi, has been completed. The 16-inch line has been put under pressure and tested as far north as Jackson.

The line will enable Southern Natural to supply gas to a number of communities in Alabama and Georgia. Prior to completion of this line the company obtained its gas in Texas and Louisiana, moving it through its pipe line system extending from the Logansport gas field, Texas, through Louisiana, Mississippi, Alabama and Georgia.

Latex Construction Company, Houston, Texas, was contractor for the line.



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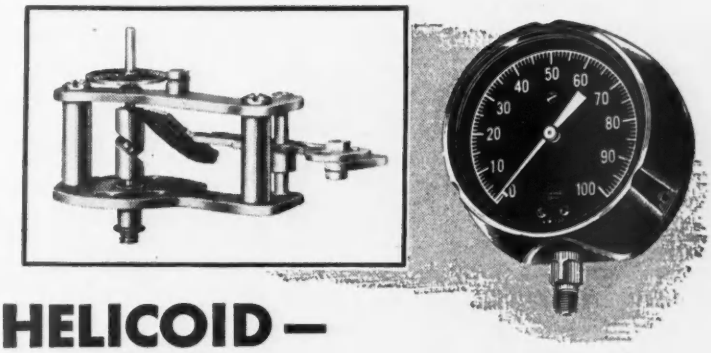

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O'Mahoney View Comes as Unexpected Complaint to Middle East Oil Deal

Middle East oil continues as the subject around which revolves much discussion and conjecture with interest quickened by negotiations through which American oil companies are attempting to acquire reserves of crude over and above the quantities now available to them.

With renewed French protests received by the United States State Department regarding consummation of the Saudi Arabia trade, spokesmen for that department have implied that it may now interest itself in the matter. First complaints of the French were, in effect, rejected when the State Department said that while it had been apprised of the pending negotiations, it considered the affair as one strictly between companies, and one upon which it looked with a certain favor because of the spread of interests in this rich source among the various American operators. Later developments, however, including the second protest, have led the department to assert it perhaps would reply after weighing the French notes.

Actually, the only question to be decided is that now in British courts—whether or not the "Red Line" agreement had been voided by wartime developments. If so, there can be no legal barriers to the final consummation of the trade, and Standard Oil Company (New Jersey) and Socony Vacuum Oil Company will acquire a 40 percent interest in Arabian-American Oil Company now jointly owned by Standard Oil Company of California and The Texas Company. Paris dispatches have intimated that British interests have now aligned themselves with Compagnie Francaise in support of its opposition to the deal. No foundation for this statement has been revealed, nor does it seem logical.

O'Mahoney Complaint

Unexpected opposition has developed in this country—charges by Senator Joseph C. O'Mahoney that such an agreement would give the four involved companies dominance of the world oil trade. The Senator has expressed fears that small, independent enterprises will be unable to compete with the resources of reserve, personnel and capital at the command of the four large companies. He says that it dramatizes the fact that corporations can become so great that they can enter into agreements with government affecting the economic life of millions.

Spokesmen for both Standard and Socony Vacuum have reiterated the fact that the sole purpose of the proposed purchase is to obtain supplies of crude oil with which to continue to compete for markets in the eastern hemisphere. Markets are expanding and it was desired to obtain sources of crude as near the markets as possible. At the same time they wanted to relieve pressure on the western hemisphere sources. It was also pointed out that the State Department, Department of Justice and others in the government had been kept fully informed on all negotiations.

"Sounds Strange"

Consideration of the O'Mahoney charges brought assertion by officials in the State Department that at present the Department has no policy on participation of American petroleum companies in foreign companies on a block basis. Meanwhile the department is keeping "hands off" and it has been indicated that such matters must be handled through presidential order or by the Congress.

One official of an involved company said that Senator O'Mahoney's charges of world domination by the four big oil companies "sounded rather strange in view of his recommendations as chairman of the Senate committee on petroleum reserves that an abundant supply of foreign oil is needed in this country."

The Senator has now called for the people of the United States to define the powers and responsibilities of the giant collective enterprises if they want to preserve individual business and local business.

Meanwhile, King Ibn Saud has gone on record with the press as favoring the negotiations, saying that anything that solidifies the company and strengthens its position pleases Saudi Arabia. However, he added the qualification that the judgment depends upon results.

Chile's Springhill 4 Abandoned; No. 5 Planned

The Chilean Corporacion de Fomento de la Produccion has started moving rig in the Springhill field to its Springhill 5, following failure to make a producer in Springhill 4. The fourth test, abandoned as dry after having drilled to a depth of 7479 feet, reported showings while the well was drilling, but electric logging survey was unsatisfactory and drill-stem tests of sands failed to show oil. Springhill 5 will be located 1100 feet southwest of No. 3, one of the two producers in the area.

No outlet has been established for the production from the area, and none is being used, so that as yet there have been no sustained production tests of the two wells. On the basis of short flow tests in each well, the discovery is estimated good for perhaps 500 barrels daily while Springhill 3 is of about the same caliber. The latter well initially showed a high gas oil ratio and very little oil, but has now started making oil with much better ratios.

Tibu Cretaceous Testing Continues In Well K-28

Colombian Petroleum Company's K-28, important Cretaceous deep test on the northeast side of the Tibu field, northeastern Colombia, was testing last week, with no decision yet made as at what point final completion would be attempted.

This well, one of a series designed to test possibilities of the prolific formation from which two wells are now producing in the field, some 2000 feet deeper

1947 Officers Houston Chapter Nomads

Officers of the Houston Chapter of Nomads to serve during the year 1947, at the annual dinner dance are shown in the above picture, left to right, as follows: Seated—Chas. E. Richards, Gray Tool Company, president; Geo. E. Tyson, J & L Supply Company, vice president; C. L. Clausel, A-1 Bit & Tool Company, secretary-treasurer; H. J. Wood, Lebanon Steel Foundry, assistant secretary-treasurer; Jack Barnes, Trinity Portland Cement Company, sergeant-at-arms. Standing—Edwin Ross, Baash-Ross Tool Company, deputy sergeant-at-arms; Floyd L. Senter, National Tank Company, regent; Chas. W. Thornhill, Thornhill-Craver Company, past president and regent; Harry E. Estes, Reed Roller Bit Company, executive secretary. (Photo by Edward Bourdon)

than the regular discovery Tertiary formations, was carried to a depth of 10,327 feet, the second deepest well to be drilled in the field. Casing was set and tests are being made through perforations opposite the Cretaceous limestone sections which had indicated showings on electric logging and core records. Thus far results have not been too encouraging, since formations have been very tight. At several points it has been made to flow, but present tests show only 30 to 40 barrels daily of 40-gravity oil flowing by heads.

The company's K-21, on the southwest side, on tests recently showed 43-gravity oil flowing at rates of 650 to 1500 barrels daily, enhanced the value of the area. However, operators are still testing, squeezing and reperforating in an attempt to locate the best producing section. Best results have been obtained from a 200-foot section between 8600 and 8800 feet. The well had drilled to 10,876 feet as one of Colombia's deepest wells, and has casing set to 10,555 feet.

Location is being decided upon for the next Cretaceous test with rig likely to be moved from K-21. It will be somewhere on the southern part of the Tibu structure, probably on the east flank.

Increase In Oil Reserves Claimed By Pemex Official

Two top administrative posts in Petroleos Mexicanos, government-controlled agency, have been filled by Antonio J. Bermudez, general managing director.

A. M. Amor is the new executive subdirector in charge of technical and administrative matters, and J. Serrano Castro has been named sub-director in charge of legal and labor matters. Castro was under-secretary of labor in the Avila Camacho administration. Amor, in the oil business for many years, served as manager of the Tampico Northern Zone for Pemex and prior to his present appointment was in charge of construction at the Atzcapotzalco refinery near Mexico City.

Carlos Reynoso, export manager, has stated that despite considerable difficulties, Pemex has increased reserves of crude in Mexico from 670 million barrels in 1938 when expropriation went into effect, to 870 million barrels at the present time, while supplying the heavily increased domestic demands which have required, including exports, the production of 225 million barrels of crude.

Pemex has paid Sinclair Refining Company and Cities Service Oil Company for its expropriated properties and has almost paid out the claims of Standard Oil Company (New Jersey) and Standard Oil Company of California, only one payment remaining to the latter and which is due this year.

Pemex Office Transfer

The Houston office of Petroleos Mexicanos has been transferred to New York City. The transfer was effective February 1 and A. G. Calderon, central material agent, said all communications heretofore forwarded to the Houston office should be sent to the New York office at 74 Trinity Place, New York 6, N. Y.

Carlos Alvarez Garcia, head of Pemex's Houston office, will be in charge of the New York office.

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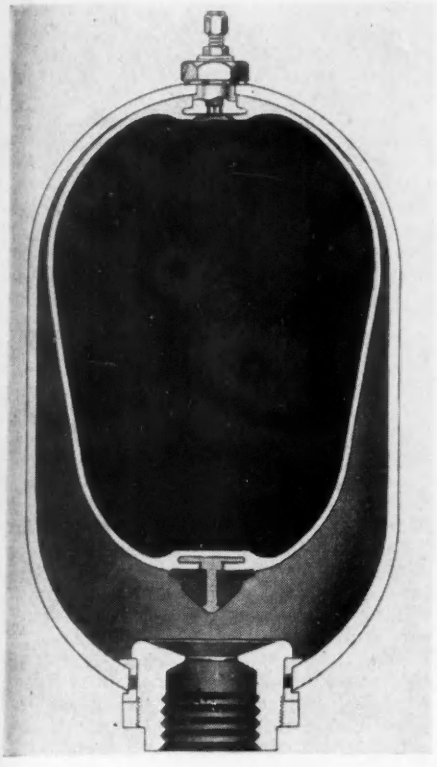


percent with unrestricted flow up to 50 gallons per minute without appreciable pressure drop in systems operating at pressures as high as 3000 pounds per square inch.

The accumulator makes use of a one-piece, seamless steel shell enclosing an air bladder made of special natural or synthetic rubber, depending on the type of fluid used in the system. The bladder incorporates an integrally moulded high-pressure automotive type air valve on one end for preloading with air pressure, and an integrally moulded conical-shaped metal plug on the other end for sealing the shell at the end of the oil discharge cycle. This metal plug eliminates direct contact between the rubber bladder and the outlet plug and thus precludes possibility of bag failure due to "pickout" of the bag from the perforated plug.

The bladder serves as a permanent wall between the air chamber and the oil chamber and eliminates leakage between the two. The bladder will withstand operating temperatures from 200 to minus 40° F., it is claimed, and will retain its air discharge up to three months without attention from the operator.

Greer Hydraulics, Inc., 454 Eighteenth Street, Brooklyn 15.

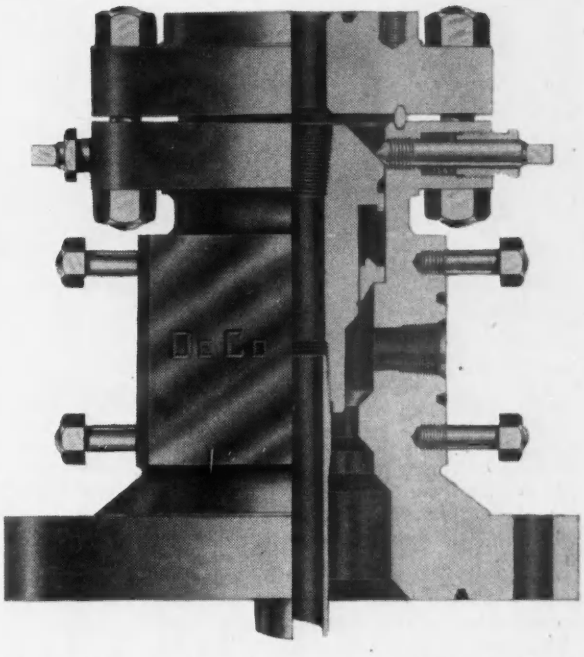
(Check item 1 on postcard for more information.)

2—Forged Well Head Equipment

New developments in forging practices have made possible the manufacture of a complete line of new, all-forged steel well head equipment, being produced under the trade name of "Deco." The new all-forged line includes Christmas trees of various types, of all standard sizes, and in a wide range of pressure ratings. Designed and manufactured to meet all API specifications covering well head equipment, this line includes four types of casing heads in the new "D" series. Types DC1, DC1F, DC and DCF all feature full throat openings through the head of the same internal diameter as that of the casing. Tubing heads are available in three types: DT, D1 and D1T, each type having the same features as those of the casing heads.

Completing the assemgly of all-forged parts are the tubing and casing hangers. Tubing hangers are offered in Types DT and DT7, each designed for specific requirements of individual well conditions. Types of casing hangers available are DC7 and DT. The tubing hangers feature a special "O" ring in addition to regular packing elements to provide positive sealing action. Both casing and tubing hangers are equipped with "Hycar" impregnated packing glands.

This new line of well head equipment is available in pressure ratings from Series 600 (2000 pounds working pressure, 4000 pounds test pressure) to Series 900 (3000 pounds working pressure, 6000 pounds test pressure). Higher pressure ratings are available on all types of well head equipment up to Series 2500, which is 15,000 pounds test pressure, if desired. Other forged parts making up the Christmas tree are



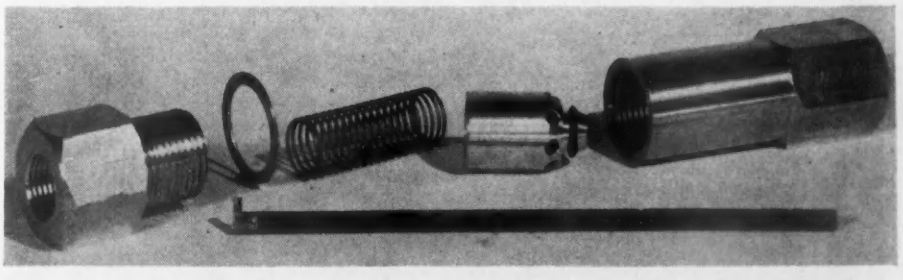
adapter flanges and hydraulic square-cut forged fittings. From these various types of hangers and heads, it is possible to assemble a variety of well heads covering all standard sizes and pressure ranges.

The DeLaney Company, 6119 East Montgomery Road, Houston 9.

(Check item 2 on postcard for more information.)

3—Check Valves

A check valve has been developed which combines a unique but simple double seal, and is said to completely eliminate leakage and loss of pressure even with grit in the system. With small particles .010 inch in diameter, the valves



have been reported to show no leakage or seepage at any pressure up to 10,000 pounds per square inch.

The double seal feature utilizes a metal-to-metal seat plus a resilient rubber or synthetic rubber ring seal on the check valve poppet. The line pressure forces the resilient ring to the metal seat, which force increases with increase of pressure resulting in greater sealing at higher pressures.

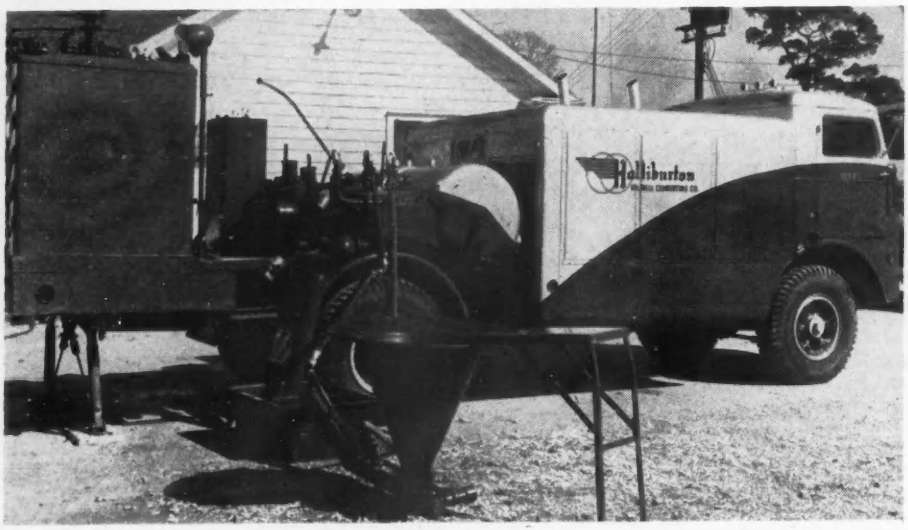
These check valves are available from ⅛ inch up to one inch in standard pipe threads for pressures to 10,000 pounds per square inch. They are applicable for any fluids which are not destructive to rubber or synthetic rubber.

Mansfield & Green, Cleveland.

(Check item 3 on postcard for more information.)

4—Cementing Truck

Abnormally high-pressure formations and deeper wells have brought about the development and manufacture of a new oil well cementing truck, called the "Super Cementer." Said to be the most powerful motor-driven cementing unit in service, the truck is powered by two 123 horsepower, four-cylinder, two-cycle, diesel engines. Complete flexibility and safety are claimed the outstanding features.



Two triplex, single-acting, power-driven pumps were especially designed to provide smooth discharge characteristics. Extensive use of magnesium, aluminum and heat-treated alloy steels have made possible the construction of this unit, which is said to safely develop in excess of 10,000 pounds per square inch pressure. The high-pressure, medium-volume triplex pump has a maximum discharge capacity of 275 barrels per hour when using 4½-inch diameter plungers. Under normal operation, four-inch diameter plungers are used for high-pressure work, in which case maximum discharge volume is 230 barrels per hour. The second triplex pump, a high - volume, medium - pressure pump, has a capacity of 350 barrels per hour when equipped with five-inch plungers and 500 barrels per hour when using six-inch plungers.

The truck bed and chassis were especially designed for these units, and contain a spacious driver's cab at the extreme front end. The two diesel engines, either of which may be used to drive the truck, are mounted immediately behind the cab and are completely enclosed as shown.

Versatility and flexibility result from the unique power transmission system. One engine is connected into the transmission system through a torque converter, while the other furnishes power through a fluid coupling and gear transmission. The system has been so designed that either of the two triplex pumps may be powered by either of the two engines. However, in normal operation, the high-volume, medium-pressure pump is driven through the torque converter, and the high-pressure, medium-volume pump is driven through the fluid coupling and gear transmission.

A dual set of controls combing electric, pneumatic and hydraulic principles, facilitate cementing operations. In addition to the engine controls mounted on the dash board in the cab, twin controls are mounted on a stand on the operator's platform between the pumps and measuring tanks.

Halliburton Oil Well Cementing Company, Duncan, Okla.

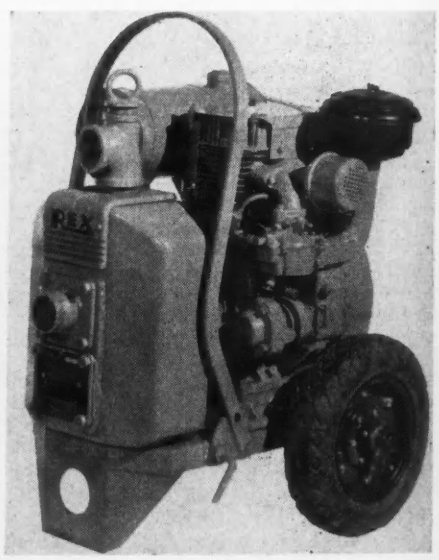
(Check item 4 on postcard for more information.)

5—Centrifugal Pump

A new line of Rex press-formed self-priming centrifugal pumps combines attractive appearance with many features of construction that are said to be unique in self-priming centrifugal pump design.

The pump body is press-formed of Armco ingot iron which is highly resistant to corrosion. The new design minimizes weight. In the two-inch size, for example the centrifugal pump weighs 90 pounds less than the former cast iron design.

The press-formed pump body resists cracking or shattering under heavy blows. Pump efficiency has been improved, due in part to the smooth surface of the pump and press-formed volute. This results in a smoother flow of water through the pump because of reduced friction and thus increases performance. A new method is designed to give faster priming.



Chain Belt Company, 1600 West Bruce Street, Milwaukee 4.

(Check item 5 on postcard for more information.)

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Made in 1½, 2, 3, 5, 8, 10, 15 and 20 gallon sizes (Push-Button Faucet at slight additional cost.
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WINFIELD, KANSAS
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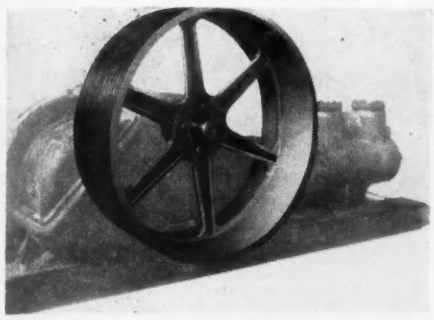
6—Sheaves

Two new lines of QD sheaves, featuring improved groove-belt fit and reinforced arm construction, have been announced. Designated as the A and B lines, each will feature individual groove



size to match belt size—thus an A groove for an A belt, and a B groove for a B belt. Former A-B combinations have been discontinued.

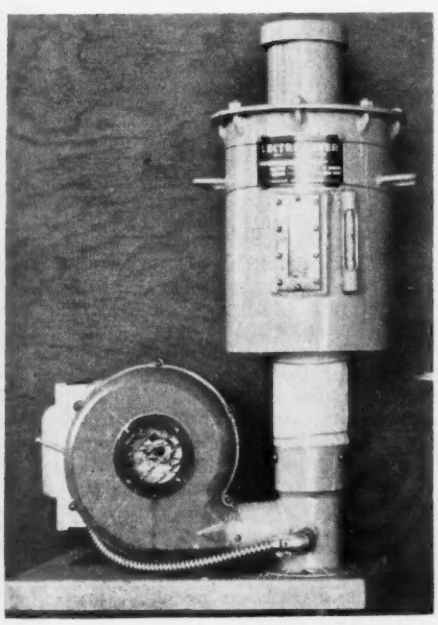
Like the "I" beam construction of a bridge girder, the reinforced arm construction of the new Worthington QD driven sheave incorporates a longitudinally ribbed arm recessed down the middle. Advantages claimed of this type arm is that material is removed at or near the neutral axis where it adds little or no strength to the arm. This material is then added at the points most remote from the neutral axis where it provides the greatest strength.

Worthington Pump and Machinery Corporation, Harrison, N. J.

(Check item 6 on postcard for more information.)

7—Storage Tank Breathers

Difficulties in replacing corroded and outworn chemical and oil storage tanks, plus the necessity of protecting the contents of such tanks against pollution and



spoilage by atmospheric moisture have brought about the concentrated production of a newly-improved line of breathers especially designed for chemical and oil storage tanks. Designated as "Lectrobreathers" by the manufacturers, these new tank breathers can be mounted directly over the tank's vent or be piped to it. Incoming air is thoroughly dried by its passage through activated aluminas contained in the breather. The air exhaled by the tank equipped with a Lectrodryer is dry, has a partial reactivating effect, thus making possible long periods between reactivations of the breather. These breathers are equipped with a color indicator for determining when they are in need of reactivation and when reactivation is complete.

Several factors to be considered before any specific size or type of breather is installed are: (1) how frequently and how fast the tank is emptied; (2) how many cubic feet the tank contains; (3) chemical nature of the tank's contents; and (4) weather conditions anticipated.

Pittsburgh Lectrodryer Corporation, Pittsburgh.

(Check item 7 on postcard for more information.)

8—Casing Protector

A recently-developed hydraulic-grip casing protector embodies an entirely different principle in design. It is made from synthetic rubber blended with toughening and abrasive-resisting material, then milled to develop grain and fibre into a solid mass of compounded rubber. It is placed in a heavy steel mold and cured under pressure and heat, then removed from the molds, cooled, inspected and tested.

Size and external appearance of these protectors are similar to present types, except that a double wall is built into the protector body. The inner wall is somewhat thinner and more flexible than the outer wall. The cavity thus formed in the protector is equipped with a valve passageway which affords a means of inflating the protector with about 30 pounds hydraulic pressure.

Application of the protector is made at the rig where the deflated protector is forced over the drill pipe tool joint

with the aid of a hand-operated protector-end expander. An inflation nozzle fits into the passageway whereby the cavity in the protector is filled with hydraulic pressure through the rig water system. Bearing surface against the drill pipe is about 100 square inches, which results

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in approximately 3000 pounds holding power when the protector is inflated. The basic design does not depend upon elasticity of the rubber for holding capacity, but upon the hydraulic pressure which is claimed not to lessen with abrasion or heat. The outer portion of the protector is made of a fabric binder built up of heavy-duty tread to minimize wear.

To remove the protector, the procedure for application is reversed. The inflation nozzle is inserted into the passageway, permitting the pressure to be bled off. The expander is used to remove the protector. The inflation nozzle, expander and gauge are furnished.

Harvey D. Sandstone Company, P. O. Box 775, Los Angeles 28.

(Check item 8 on postcard for more information.)

Literature

9—Drain Hole Drilling

The first comprehensive engineering bulletin issued on the subject of horizontal drain hole drilling details the advantages of horizontal drilling by the Zublin method, it is profusely illustrated with drawings of well formations, photos of the equipment necessary for horizontal drilling, and reviews the operations and theories involved.

Turbine Bit Company, 2369 E. 51st Street, Los Angeles 11.

(Check item 9 on postcard for more information.)

10—Hydrocarbons

"Light Hydrocarbons" is the title of a new handbook-style tabulation which presents properties of hydrocarbons and light petroleum liquid and gases. Both thermal and combustion data are included.

Griffin Chemical Company, San Francisco.

(Check item 10 on postcard for more information.)

11—Pumper

Blueprints, sketches, 11 "explosion" photographs and complete specifications of the Type D-5 unit pumper are contained in a new bulletin. The two-color bulletin, No. 332, lists advantages and features of the pumping unit. Readily adaptable for medium and high speed prime movers, the pumper has a walking beam rating of 5200 pounds.

The National Supply Company, P. O. Box 899A, Toledo 1.

(Check item 11 on postcard for more information.)

12—Prefabricated Houses

Specifications covering several models of prefabricated houses suitable for domestic and foreign use are now available. The plans, printed on standard eight by ten-inch stock contain front, right side, left side and front elevation and specifications. In the case of two-story prefabricated houses, plans of both floors are presented. A wide variety of types are available as indicated in the specifications. Flexibility in design make possible several types of finishes on the same house. Photographs and sectionalized scale plans of these prefabricated houses are shown. These homes, according to the manufacturer, are suitable for shipment and are virtually complete.

The HomeOla Corporation, 9 South Clinton Street, Chicago 6.

(Check item 12 on postcard for more information.)

13—Diesel Engines

Pictures and stories of nearly 100 varied installations of diesel engines are included in the first postwar edition of *The Dependable Diesel.*

The 36-page magazine tells of successful applications of the diesel engine in the trucking, marine, logging, railroad, petroleum, construction, mining and railroad fields, along with a number of miscellaneous applications.

A complete account of the steps which the company took in testing America's first successful high speed diesel engine is told in an article entitled "High Speed Diesel Pioneer," and the story of the Sales and Service network is told in another two-page article.

Cummins Engine Company, Columbus, Ind.

(Check item 13 on postcard for more information.)

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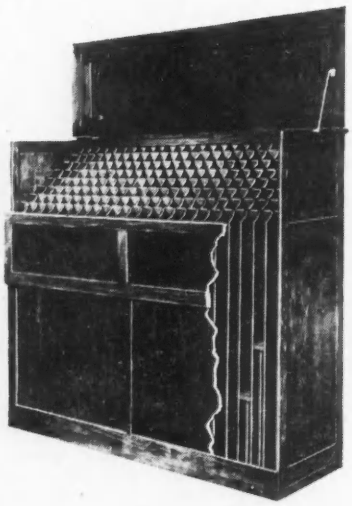
Stock sizes include 60, 100, 150 and 200-map capacity cabinets in both walnut and oak finish.



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Refining Operations Cut Back Slightly; Gasoline Output Off, Fuel Oil Gains

The industry's total refining operations were cut back slightly during the week ending February 1, with gasoline output dropping and fuel oil production increased. Although the week's demands on the burning oil's stocks continued heavy, withdrawals showed some easing from the week before. Additions to gasoline stocks were considerably off from the previous week's accumulations. This report was taken from the American Petroleum Institute's weekly bulletin.

Daily crude production dropped 22,000 barrels to average 4,650,000 barrels during the week, which was 41,000 barrels or about 1 percent over the daily output of last year's comparable week.

The industry's refineries ran an average of 4,783,000 barrels of crude a day to stills, a drop of 37,000 barrels from last week's daily runs, but 282,000 barrels or 6.3 percent more than those of the like week last year.

Stocks of refinable crude totaled 221,655,000 barrels on January 25, an increase of 511,000 barrels from a week earlier, according to the Bureau of Mines. That latest stock total was 1,111,000 barrels or ½ of 1 percent greater than stocks on hand a year before.

Production of gasoline, which included natural blended at the refinery was cut back 14,000 barrels to 14,610,000 barrels for the week, which was still 1,309,000 barrels or 9.8 percent more than was produced in last year's comparable period. Stocks of finished and unfinished gasoline increased 778,000 barrels during the seven-day period and stood at 100,579,000 barrels at the week's end. Those stocks were 1,995,000 barrels or almost 2 percent less than those on hand a year ago.

Distillate fuel oil output was upped 30,000 barrels to 5,660,000 barrels for the week, which was within 1000 barrels of production a year ago. Withdrawals totaling 2,226,000 barrels reduced stocks of this light fuel to 48,131,000 barrels. That amount exceeded the stocks held a year before by 19,211,000 barrels or 66.4 percent.

Texas Gasoline and Atlantic Seaboard Fuel Prices Up

Increases in Texas' gasoline and Atlantic Seaboard's heavy fuel oil prices were reported last week, while slight reductions were made on light fuel oil quotations in the New York area.

Gasoline demand remained steady in most areas, allowing little opportunity for stock buildup. Western Pennsylvania refiners report they will enter the spring season with only 50 to 75 percent of normal gasoline stocks. Most grades of gasoline were reported increasingly tight on the Texas Gulf Coast, with export inquiry for the lower octane grades far exceeding that of domestic, and which is resulting in fewer offerings of the lower grades than Ethyl and regular.

Tank wagon prices for gasoline, kerosine, distillates and tractor fuels were advanced 0.5 cent by The Texas Company in all Texas areas except west of the Pecos River. This price hike became effective February 1, company officials announced. It was explained that this raise was due to November's crude price advance and the new higher rail rates. By the middle of the week other major marketers in the area had followed The Texas Company's price lead.

Socony-Vacuum Oil Company announced 10 cents per barrel raises in tank car and barge prices for Nos. 5 and 6 fuel oils on the Atlantic Seaboard, effective February 4. New York harbor's barge price for No. 6 fuel was increased from $1.92 a barrel to $2.02, while tank car lot price at Albany was hiked to $2.22, at Providence to $2.035, at Boston and Portland to $2.065, and at Philadelphia from $1.92 to $2.20. Tank car prices for "hot" No. 5 fuel were advanced 10 cents per barrel to $2.23 at Philadelphia, $2.405 at Boston, $2.375 at Providence, and $2.545 at Portland.

A reduction of 0.1 cent in No. 2 fuel tank wagon prices for northern New Jersey was announced by Standard Oil Company of New Jersey during the week. Price at Newark was reduced from 8.6 to 8.5 cents.

The only crude price change report for the week was the Pan American Production Company's announcement it had reduced its postings for crude from the Manziel field, in East Texas, by 10 cents per barrel.

Trends of Operations and Changes in Stocks

Figures on crude stocks are from Bureau of Mines weekly reports; all others from American Petroleum Institute weekly reports, which are estimates on Bureau of Mines basis.

(All figures in thousands of barrels—add 000)

HIGHS AND LOWS OF RECENT YEARS

ITEM	Crude Oil Prod. Barrels Daily	Crude Oil Prod. Week Ended	Runs to Stills Barrels Daily	Runs to Stills Week Ended	Crude Stocks Barrels	Crude Stocks Week Ended	Gasoline Stocks Barrels	Gasoline Stocks Week Ended	Gasoil and Distillate Stocks Barrels	Gasoil and Distillate Stocks Week Ended	Residual Fuel Oil Stocks Barrels	Residual Fuel Oil Stocks Week Ended
Highs:												
1941	4,337	11-22	4,120	10-18	266,187	3-29	99,727	3-29	54,983	11-15	102,448	1- 4
1942	4,337	2- 7	3,961	1- 3	263,208	3-28	[1]109,281	3-14	47,861	11-14	95,857	1- 8
1943	4,436	11-13	4,331	12- 4	245,752	5-29	94,159	3-20	47,187	11-27	72,881	1- 2
1944	4,762	9-30	4,798	12-30	240,992	1- 1	89,162	4- 1	48,162	10-28	64,744	10- 7
1945	4,944	7-21	[5]15,140	8-18	227,554	10-13	99,012	3-24	45,341	11-17	56,074	1- 6
1946	[4]14,961	6-15	4,968	12-28	229,430	3- 2	105,233	2-16	[4]67,286	11- 9	61,636	11- 2
1947	4,672	1-25	4,917	1- 4	223,291	1- 4	100,579	2- 1	58,034	1- 4	53,285	1- 4
Lows:												
1939	[3]1,601	8-26	3,125	2-18	[2]229,127	10-12	71,152	10- 7	20,722	4-15	105,397	4- 3
1941	3,364	1-11	3,490	1-18	240,399	11-15	79,923	10- 4	28,382	4-12	90,914	7-13
1942	3,297	7- 4	3,393	5-23	231,896	12-12	75,934	12- 5	29,240	4-25	72,962	12-26
1943	3,821	1- 9	3,579	3-18	232,191	1- 9	68,182	10-16	30,732	4- 3	57,596	12-25
1944	4,357	1- 1	4,228	2-12	220,258	9- 9	76,302	1- 1	30,232	4-19	49,737	3-18
1945	3,621	10- 6	3,409	10-6	[4]211,813	8-25	70,791	10-13	26,483	3-17	38,548	5-26
1946	4,403	3- 9	4,498	1-12	218,193	1- 5	85,324	9-28	25,131	3- 9	37,289	4- 6
1947	4,531	1-11	4,776	1-18	220,553	1-11	94,882	1- 4	48,131	2- 1	47,947	2- 1

TRENDS OF 1946 AND 1947

Trends in Week Ended	Crude Oil Production Daily	Crude Oil Runs to Stills Daily	Crude Oil Stocks Week End	Gasoline Production Weekly	Gasoline Stocks Week End	Gasoil and Distillate Production Weekly	Gasoil and Distillate Stocks Week End	Residual Fuel Production Weekly	Residual Fuel Stocks Week End
1946:									
January 5	4,548	4,651	218,193	14,488	98,494	5,293	35,199	8,867	42,371
January 26	4,626	4,553	220,544	13,622	101,737	5,720	29,498	8,411	39,722
February 23	4,714	4,595	226,699	13,175	104,709	5,728	25,398	7,913	39,290
March 30	4,425	4,684	224,994	13,896	104,715	5,337	28,240	8,738	37,746
April 27	4,672	4,685	224,443	14,228	99,631	5,568	30,466	9,204	39,404
May 25	4,759	4,857	222,214	14,312	95,769	5,463	32,973	8,908	43,368
June 29	4,957	4,854	223,883	14,500	92,333	5,325	37,762	8,828	46,447
July 27	4,926	4,896	223,756	14,535	88,626	5,817	44,316	8,217	49,517
August 31	4,833	4,911	227,132	15,014	87,217	5,630	53,134	8,539	53,173
September 28	4,778	4,829	223,043	14,675	85,324	5,632	59,827	8,172	57,657
October 26	4,730	4,758	221,184	14,863	86,423	5,710	65,499	7,728	60,872
November 30	4,795	4,707	227,693	15,145	88,371	5,258	66,062	7,672	58,647
December 28	4,713	4,968	225,995	15,604	93,126	5,931	58,941	8,181	53,427
1947:									
January 4	4,649	4,917	223,291	15,281	94,882	5,857	58,034	8,375	53,285
January 11	4,531	4,778	220,553	14,928	96,547	5,820	54,788	7,801	51,423
January 18	4,624	4,776	221,144	14,653	98,013	5,495	52,726	8,156	50,539
January 25	4,672	4,820	221,655	14,624	99,801	5,630	50,357	8,224	48,558
February 1, 1947	**4,650**	**4,783**	.....	**14,610**	**100,579**	**5,660**	**48,131**	**8,516**	**47,947**
February 2, 1946	4,609	4,501	[5]220,544	13,301	102,574	5,661	28,920	8,522	34,485
Change:									
In Week	−22	−37	+511	−14	+778	+30	−2,226	+292	−611
In Year	+41	+282	+1,111	+1,309	−1,995	−1	+19,211	−6	+13,462
In Year	+0.9%	+6.3%	+0.5%	+9.8%	−1.9%	0.0%	+66.4%	−0.1%	+39.0%

[1] All time peak. [2] Lowest between January, 1922 and July 1, 1944. [3] Lowest since October, 1922, due to shutdown of six Mid-Continent states. [4] Lowest since December, 1921. [5] Stocks, January 26, 1946.

WHITNEY NATIONAL BANK
OF NEW ORLEANS

ESTABLISHED 1883

REPORT TO COMPTROLLER OF THE CURRENCY (CONDENSED)
AS OF TUESDAY, DECEMBER 31, 1946

RESOURCES		LIABILITIES		
Cash and Due From Banks	$ 81,505,910.82	Deposits		$326,418,721.72
U. S. Government Obligations, Direct and Fully Guaranteed	151,966,361.17	Acceptances Account of Customers and Letters of Credit		2,228,566.22
State, County and Other Public Bonds	28,826,828.17	Dividend Declared, Payable January 2, 1947		84,000.00
Other Bonds and Securities	297,301.04	Accrued Interest, Expenses and Reserves		978,072.52
Loans, Discounts and Acceptances	76,129,838.35	Capital	$2,800,000.00	
Customers' Liability Account of Acceptances and Letters of Credit	1,368,609.29	Surplus	9,200,000.00	
Stock of Federal Reserve Bank	360,000.00	Undivided Profits	2,713,662.88	14,713,662.88
Accrued Income Receivable and Prepaid Expenses	749,923.51			
Banking House, Furniture and Fixtures	2,574,256.64			
Branch Banking Houses	539,572.80			
Other Real Estate	104,421.55			
TOTAL	$344,423,023.34	TOTAL		$344,423,023.34

DEPOSITARY OF THE UNITED STATES GOVERNMENT, STATE OF LOUISIANA AND CITY OF NEW ORLEANS

MEMBER OF THE FEDERAL DEPOSIT INSURANCE CORPORATION

Oklahoma Wildcat Sets Depth Mark; Drilling Continues Below 16,677 Feet

Superior well breaks depth record; Sohio starts second well in Eola area; gas pool opened in Okmulgee County; G. I. Joe pool may be extended south; new oil pool opened in Carter County; prospective pool opener shows gas on test.

Caddo County: The Superior Oil Company of California has broken the world depth record with Weller 51-11, wildcat near Fort Cobb.

The test, in NW NW NE, 11-8n-12w, passed the previous record of 16,668 feet set by the Pacific Western Oil Company's National Royalties 1, in Kern County, Calif., and on February 4 its total depth was set by company officials at 16,677 feet. And no detailed information on formations or testing is being released by Superior.

Nine-inch casing was set at 10,240 feet, and seven-inch to 16,351 feet. The nine-inch string was flush-jointed, and the seven-inch string was engineered for the well, the company reported. This seven-inch string is tapered from 38 pounds per square foot to 32 pounds per square foot, which enables the pipe to go in without parting under its own weight.

The Weller 51-11 was spudded in May, 1946, and on October 31, 1946, it broke the Oklahoma depth record by drilling below 14,583 feet. At the beginning of 1947 the longest string of pipe ever to be set in a hole was run.

The company has been careful to eliminate any mistake in measurements of the Weller's depth, and repeated checks and measurements have been taken. Latest was taken when tools were pulled to install a new bit at the total depth. It requires crew from five to seven hours to make a "trip."

Superior's Weller had been averaging from five to ten feet of hole daily for the last week, prior to which it was making as high as 35 to 40 feet per day.

Edward Smith of the Company's Oklahoma City office said a previous report that the hole was caving was true, although this report was denied by some. "We decided to cement casing before this trouble increased," he said.

Smith said that during the time the Weller has been drilling there has been but one minor fishing job.

As far as can be ascertained, the well has failed to yield commercial shows.

Garvin County: A new wildcat, approximately 3½ miles south and east of Sosio Petroleum Company's Howard 1, SE SE NW 17-1n-2w, pool opener completed for 2400 barrels of oil daily, has been staked by Sohio, and drilling will get under way immediately. The new venture is Kennedy 1, NW NW SE 26-1n-2w. It is believed the new location is on the same general structure as the Howard, which is producing from basal Bromide from 10,064-234 feet, total depth.

Okmulgee County: A gas pool has been opened north of Okmulgee by Monarch Royalty Corporation of Oklahoma. Woodman-Daley 1-A, NE NW NE 1-13n-13e, is making 4½ million cubic feet of gas per day from the Glenn (Pennsylvanian) sand at 1793-97 feet, total depth. The gasser is approximately 6½ miles north of Okmulgee and a mile north of the old Cosden pool which was productive in the Glenn, Fields and Wilcox sands in early development of the county. Woodman-Daley 2-A, NE NE NE Sect. 1, an east offset to the 1-A, picked up the Glenn formation at 1778 feet, and from 1778-1801 feet is making 3½ million cubic feet of gas per day.

Osage County: A ½ mile south extension for the G. I. Joe pool may be accomplished by Winona Oil Company's Osage 1, NW NW SE 13-22n-11e. The hole filled up with 300 feet of oil in 1 hour on a test of the Burgess sand at 1635-50 feet, and in 2 hours the oil had risen to 1335 feet. Crew has shut in the well as casing has not been run.

Carter County: H. F. Gibson apparently has opened an oil pool with Smith 1, wildcat in NW NW SW 14-1s-5w, 3 miles southeast of the Lone Grove Southwest pool. Free oil and some gas were recovered on a drill-stem test from Pennsylvanian sand, 3436-52 feet. Testing continues. The well is northwest of the old Brock pool.

Grant County: Looming as a possible pool opener is Stauffer Petroleum Company's Hall 1, NE NE SE 9-25n-7w, east of Nash. Drilled to 3645 feet, top of the Tonkawa sand was called at 3400 feet. A good show of gas and some oil stains were logged at this depth. Hole is being loaded with heavy mud to prevent a possible gas blowout until it is decided whether to complete as a gasser of drill on for oil.

Oklahoma Allowable Hiked

Crude production for February in Oklahoma has been set at 371,700 barrels daily by the State Corporation Commission after the monthly market demand hearing which followed a conference of operators with the Conservation staff. This new total is up 9300 barrels daily from the January allocation.

☆ Kansas

Rice County Has New Producing Area in Welch Pool Vicinity

Oil pool opened in Rice County; Hugoton test is failure; Kingman County pool opener given bomb potential; Sunray completes wildcat for 240 barrels.

Rice County: Branine & Hall opened an oil pool 2 miles west of production

Wells Completed in the United States in Week Ended February 1, 1947

Data preliminary and subject to revision. Revised and more complete data on all completions and exploration shown in monthly summaries published in last issue of each month.

State or District	FIELD COMPLETIONS: New Wells Oil	Dist.	Gas	*Input	Dry	Total	Old Wells Deepened	EXPLORATORY COMPLETIONS Oil	Dist.	Gas	Dry	Total	ALL COMPLETIONS This Week	Last Week	This Week 1946
Alabama															1
Arkansas	3					3					2	2	5		3
California	18		1		2	21		2			3	5	26	41	37
Colorado	4					4							4	4	
Florida														1	
Illinois	16				12	28					2	2	30	46	43
Indiana	7				4	11					5	5	16	6	7
Kansas	20		4		9	33	1	1		2	3	6	40	38	62
Kentucky	3		1		2	6					3	3	9	4	1
Louisiana	15	1	2		10	28		1			2	3	31	27	20
N. Louisiana	6		2		5	13					1	1	14	14	9
S. Louisiana	9	1			5	15		1			1	2	17	13	11
Michigan	2		2		4	8	1	1			7	8	17	12	7
Mississippi	3					3		1			4	5	8	5	7
Missouri											1	1	1		
Montana			1		2	3							3	1	5
New Mexico	3		1		1	5	1				1	1	7	12	15
New York	14			9		23							23	27	25
Ohio	5		14		9	28					1	1	29	26	24
Oklahoma	26		3		16	45	2	3		1	15	19	66	72	93
Pennsylvania	27		10	15		52	1						53	51	45
Texas	68	1	8		25	102	6	5		1	21	27	135	143	158
E. Tex. Bor. Co.'s	2				1	3							3	3	3
Rest of E. Tex.	4				1	5	2				2	2	9	3	14
North Texas	20		1		11	32		2			4	6	38	36	40
W. Central Tex.					2	2				1	4	5	7	8	20
West Texas	26				3	29	3	1			3	4	36	35	33
Texas Panhandle	1		7		1	9							9	6	8
G. Coast, Upper	2	1			4	7					1	1	8	21	12
G. Coast, Lower	7				2	9	1	1			4	5	15	19	19
Southwest Texas	2					2					2	2	4	10	8
S. Central Tex.	4					4		1			1	2	6	2	1
West Virginia			11		2	13							13	11	14
Wyoming	4		2		1	7		1			1	2	9	4	1
Total U. S.	238	2	60	24	99	423	12	15		4	71	90	525	531	568

* Includes salt water disposal wells.

in the Welch pool with Sullivan 1, SW SW SW 4-21s-6w. About 2700 feet of oil rose in the hole from the Mississippi lime, topped at 3440 feet. Total depth is 3466 feet, where testing continues.

Hamilton County: Unusual in the Hugoton gas field is a failure, as most tests get gas, even if in small quantities and at low pressure. Stanolind Oil & Gas Company, which has been carrying on intensive drilling in Hugoton, reports that McDowell 1, 14-25s-39w, has been abandoned at 2564 feet. Various gas sands were tested through perforations, but these failed to show commercial production.

Kingman County: Plains Exploration Company's wildcat which opened a new oil pool, has established a bomb potential of 1604 barrels of oil per day. The well, the Swander 1, SW SE SW 20-28s-9w, is producing from the Viola lime through perforations at 4407-11 feet.

Rooks County: Sunray Oil Corporation has opened an oil pool with Wilson 1, SE SW SE 35-10s-18w. The well swabbed 240 barrels of oil in 4 hours after being deepened to 3601½ feet, which is ½ foot in the Arbuckle lime. Nearest production is a mile southwest.

Utilities Session Set

The annual convention of the Oklahoma Utilities Association will be held in Tulsa March 20-21. D. W. Reeves, Oklahoma Natural Gas Company, Tulsa, is chairman of the convention committee.

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Extensions Assured for Yeso Pay in Eunice Townsite

Extensions assured for Yeso pay in Eunice Townsite area of Lea County, while southeastern sector of county given an Ellenburger prospect; Kutz Canyon deep test yields small amount of gas on preliminary test.

Lea County: Repollo Oil Company's Cone 1-B, C SE SW 26-21s-37e, northeast edge of the expansive Yeso (Drinkard) pay for the Eunice Townsite area, tested 2,300,000 cubic feet of gas when tester was used at 6452-565 feet, and at 6510-610 feet yielded gas to the surface within 2 minutes. The recovery consisted of 1680 feet of oil- and gas-cut mud and 30 feet of free oil. More oil pay was logged in drilling to 6675 feet, where test was pending before setting pipe. This outpost is about 30 feet low, and is near the edge of production.

Barnsdall Oil Company's Hardy 2, C SW NE 29-21s-37e, offsetting the most northwesterly Yeso producer, drilled through the pay to 7065 feet, and cemented 7-inch casing at 6530 feet to complete from the 6600-foot zone.

Amerada Petroleum Corporation's Corrigan 7, SE NE 4-22s-37e, northeast edge of the Brunson area, flowed 458 barrels of oil, with gas-oil ratio of 801/1, on 19-hour natural test through ½-inch choke from Ellenburger sand perforations at 7604-34 feet. This is the highest well in the area, and Ellenburger dolomite pay at 7421 feet to 7604 feet will not be tapped until the sand beds are depleted. Repollo's Brunson 6, NW SW 3-22s-37e, cemented 5½-inch pipe at 6584 feet, with the hole bottomed at 6598 feet, to complete in the Yeso. It was slated to explore the Ellenburger but a north offset drilled into granite without logging Ordovician. A later test nearer the west line of the lease may be drilled to the Ellenburger.

Amerada's State 3-A, NW NE 32-18s-38e, ½ mile southwest outpost for the Bowers sand sector of the Hobbs field, tested 1½ million cubic feet of dry gas initial from perforations at 3149½-50½ feet in the Bowers sand, topped at 3144 feet. Perforations have been squeezed for a retest. Gas is in demand for field operations.

R. Olsen Oil Company has contracted to drill Wimberly 1, C SE NE 23-25s-37e, to 9500 feet, or water in the Ellenburger. Five companies have contributed dry-hole money and acreage. Location is 1½ miles south of a 9592-foot granite failure, being the first pre-Permian test for Lea County.

The Texas Company's Garrett 1, C NE SE 22-16s-38e, wildcat that indicated possible marginal pumper after nitro shot of acid in broken lime in the San Andres, topped at 4940 feet, with elevation of 3716 feet, was drilling at 5633 feet to explore the Glorietta. Top of San Andres correlates 109 feet high to a 10,085-foot Basal Permian failure 1¼ miles southeast.

Devonian Oil Company's Browne-Federal 1, northeastern Lea County wildcat that swabbed and flowed 109 barrels of fluid, including 5 to 30 percent basic sediment and water, and the balance 25.4-gravity oil on 10-hour test, was installing pumping unit. Production

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is from open hole at 4926-5011 feet in San Andres, topped at 4230 feet.

San Juan County: Byrd & Frost, Inc., Paul B. English and Stanolind's Hargrove-Federal 1, Kutz Canyon prospect, is credited with having resumed coring after testing a small volume of gas when plugs were drilled from 7-inch at 6470 feet.

Ratable Cuts Ordered

Shell Oil Company, Inc., was ordered by the Texas Railroad Commission to distribute cuts in its purchases of crude in West Texas, occasioned by alleged shortage in transportation and storage facilities, ratably to all fields in which it has connections.

☆ West Texas

Jordan Field Test Confirms Production in Ellenburger

Ellenburger production established in the Jordan field, Ector County; Clear Fork discovery in prospect for west side of Goldsmith field; rapid development likely for Hale County's Pennsylvanian discovery.

Ector County: Gulf Oil Corporation and E. E. Fogelson's University 1-A, near C SW SW Sect. 7, Block 35, offsetting 3600-foot San Andres production in the Jordan field, confirmed the area for Ordovician production when a tester was used at 8925-60 feet in Ellenburger, topped at 8914 feet with elevation 2834 feet. The well yielded gas to surface within 18 minutes at the rate of 134,000 cubic feet daily, and the recovery consisted of 2160 feet of 43-6-gravity oil and 225 feet of oil- and gas-cut mud. This showing assures the completion of a commercial producer, but the well will be deepened 25 feet or more before setting pipe. Possible oil production was passed up in the Clear Fork. Tops of pre-Permian markers follow: Devonian 6970 feet, Silurian 7740, Simpson 7965, McKee 8308, Waddell 8654.

Gulf set a new district record for cash outlay in supporting its favorable subsurface and geophysical information as to deep production possibilities in the Jordan area. The company paid Fogelson $1 million cash for undivided one-half interest in the deep rights under four 160-acre leases, with obligation to drill a free well. Gulf paid Kewanee Oil Company $250,000 cash for undivided one-half interest in the deep rights under two 160-acre tracts southeast of the well, and a free well. Prior to these purchases Gulf and others had supplemented their original leases in the area with scattered purchases on the west side of the structure, and deep rights within the field.

The Texas Company will offset the new strike to the west, and Shell Oil Company to the south. In the meantime The Texas Company is rigging up to drill Connell 31, an Ellenburger prospect 3 miles west by south of the discovery and in Crane County. This involves a separate geophysical prospect.

Phillips Petroleum Company's T. P. Land Trust 1-M, C NW NW T&P Railroad 13, Block 45, T-1-S, 1¼ miles west of the Goldsmith field and 3 miles east of Ellenburger production in the TXL field, logged oil-saturated lime in the Clear Fork at 6970-7060 feet, and a drill-stem test at 6970-7083 feet yielded sweet gas to the surface within 35 minutes. The recovery consisted of 450 feet of oil- and gas-cut mud. This showing indicates a probable producer, but the prospect will continue to 12,000 feet, or water in the Ellenburger. Near-by companies have posted dry-hole-money letters, including $25,000 by Fullerton Oil Company. The well is structurally low, having entered the San Andres at 4300 feet, with elevation 3263 feet.

Shell Oil Company's Scharbauer 2-B, ⅓ mile northeast outpost and the fifth flowing producer from the Clear Fork on the north end of the Goldsmith field, registered a potential of 459 barrels of 41-gravity sweet oil, with gas-oil ratio 641/1, on ¼-inch choke from open hole at 6095-285 feet.

Gulf's Goldsmith 421-E, first deep test for the main sector of the Goldsmith structure and with commercial production assured from the Devonian, topped at 7985 feet, with elevation 3115 feet, encountered small showings from the Silurian. A drill-stem test at 8680-735 feet yielded 120 feet of oil- and gas-cut mud, with the oil content estimated at 1 percent. It will continue to the Ellenburger. Twin drilling in this sector of the field is a certainty.

Hale County: Stanolind Oil & Gas Company's Fisher 1, Pennsylvanian oil discovery for the South Plains Basin, registered potential flow of 1342 barrels of 39-gravity green oil, with gas-oil ratio 307/1, through 28/64-inch choke after using 2500 gallons of acid in open hole pay at 6805-992 feet. Rig will be skidded

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southeast to drill LaFont 1. The discovery's allowable will be trucked to refinery at Levelland until Stanolind Pipe Line Company builds a 7-mile extension line from its 16-inch carrier to the new area. This new sweet crude pool will have a high priority on Stanolind's development program, if production embraces an appreciable area, as it involves the nearest West Texas oil to its Midwestern refineries, and drilling costs are below the average for sweet oil in West Texas.

Crockett County: Stanolind's University 1-TT, wildcat that passed up gas-distillate production in detrital zone overlying the Ellenburger, topped at 8080 feet, with elevation 2584 feet, was drilling Cambrian sand at 8805 feet without shows.

Sinclair Prairie Oil Company has sold an undivided half interest in its 2492-acre drilling block acquired at the December University sale for $910,000 cash, or $365.95 per acre, along with obligation to start an Ellenburger test within 6 months, to The Atlantic Refining Company at cost, plus handling charge. The former will operate the property, if production is developed. This record-priced drilling block centers upon University Blocks 45 and 46.

Crane County: Texas Gulf Producing Company's Rio Bravo 1, H&TC 7, Block 31, was drilling shale at 5605 feet in Simpson, topped at 5020 feet, or 108 feet low to Skelly Oil Company's Richardson 1, Ellenburger failure 1⅛ miles west that had encouraging oil show below 5460 feet.

Gulf's University 1-HH, 3¾ miles north by east of the Block 31 field and a separate structure, tested gas at the rate of 58,710 cubic feet daily, and recovered 345 feet of gas-cut mud when tester was used in Basal Devonian at 8939-9095 feet. Tests at higher levels in the Devonian, topped at 8390 feet, indicated commercial production, assuring the company 3 deep-pay strikes in the district.

Winkler County: Santa Fe Petroleum Company's Wheeler-Magniolia 1, C NW NW PSL 21, Block B-6, was negotiating a new depth contract after reaching 11,010 feet in Simpson shale. Amon Carter et al's Wight-Gulf 1, 2⅞ miles southeast, was drilling shale at 9640 feet, and is credited with being 431 feet low to the Santa Fe prospect in topping the Woodford shale at 9550 feet. However, it indicated probable production in the Clear Fork, and a drill-stem test at 9318-454 feet returned 1240 feet of gas-cut mud.

Compact Outlines Work of Engineering Committees

Organization and functioning of oil field engineering committees is the subject of a booklet being distributed from the Interstate Oil Compact Commission's Oklahoma City office (P.O. Box 3185).

The publication contains report of a subcommittee of the Commission's Legal Committee, appointed to study the subject of oil field engineering committees and draft provisions suitable for use in their organization.

Included also are organization agreements of eleven engineering committees, as follows: Yates, Conroe, East Texas, Goldsmith, North Basin, Carthage, La-Gloria, Seeligson, Lea County, West Edmond, and Mississippi.

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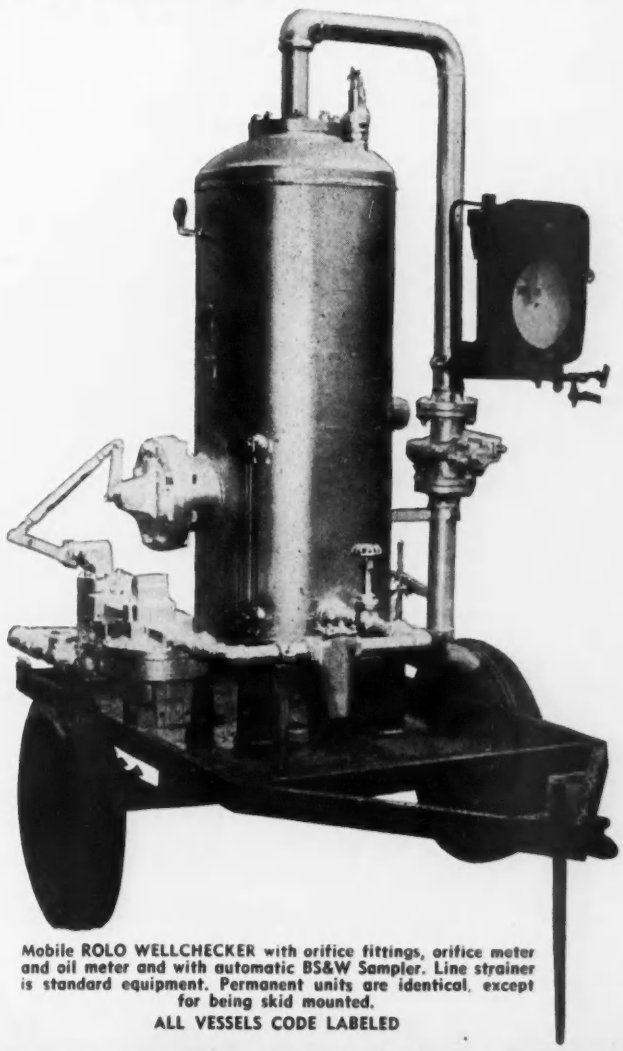

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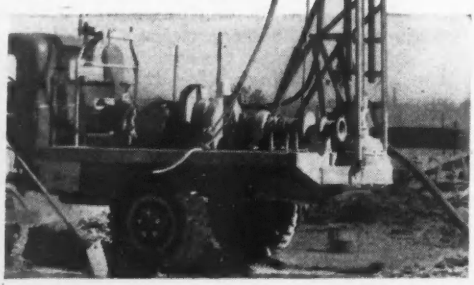

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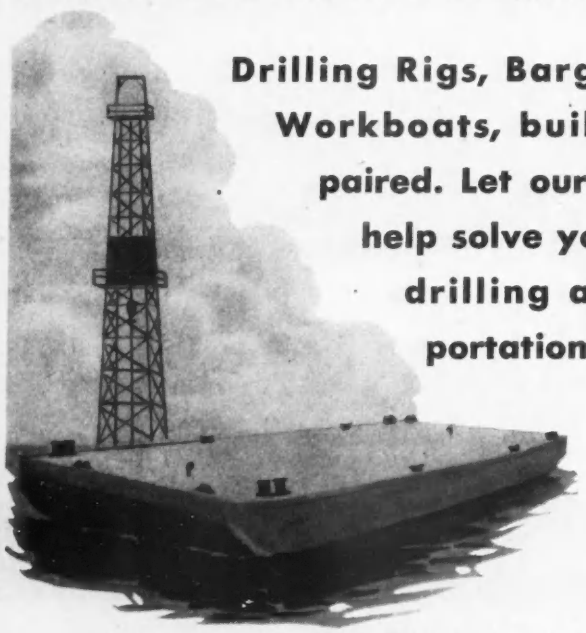

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☆ North Texas

Young County Semiwildcat Has Prolific Oil Flow from Strawn

Semiwildcat in Young County registers prolific flow from the Strawn; Collin County wildcat nearing decisive depth in Ellenburger; confirmation well given Paradise-Canyon field.

Young County: Grace & Grace's Harrison 1, Phillip Jaimes Survey semiwildcat and east of a 2600-foot pumper, flowed at the rate of 864 barrels of 43-gravity oil daily on ¾-inch choke from Strawn perforations at 3820-74 feet. Owners have started a southeast offset.

Collin County: Standard Oil Company of Texas' Newsome 1, Frisco geophysical prospect, entered barren Ellenburger at 7470 feet, with elevation 763 feet, and was drilling dolomite at 7870 feet. Nomi-

THE OIL MAN'S CALENDAR

FEB. 18	Statewide proration hearing, Texas Railroad Commission, Houston, Rice Hotel.
MAR. 8– 9	Mid-Year Meeting of Directors, Independent Petroleum Association of America, Jackson, Miss.
17–19	AIME World Conference on Mineral Resources, New York, Waldorf-Astoria Hotel.
20–22	AIME 75th Anniversary Celebration and Annual Meeting, New York, Waldorf-Astoria Hotel.
24–27	Annual Meeting American Association Petroleum Geologists, Society Economic Paleontologists and Mineralogists, Society Exploration Geophysicists, Los Angeles. Biltmore Hotel.
27–28	Southwestern District API Division of Production, Spring Meeting, Fort Worth, Blackstone Hotel.
APRIL 7–10	National Association of Corrosion Engineers, Annual Convention, Chicago, Palmer House.
8– 9	Annual Meeting, Texas Producers and Royalty Owners Association, Dallas.
15	National Petroleum Council, Washington, D.C.
16–18	Southern Gas Association, Biloxi, Miss.
16–18	Eastern District, API Division of Production, Spring Meeting, Pittsburgh, William Penn Hotel.
23–25	Natural Gasoline Association of America, Annual Convention, Dallas, Baker Hotel.
APRIL 30 MAY 1– 2	American Gas Association, Natural Gas Division, Spring Meeting, Chicago, Stevens Hotel.
4– 7	Annual Membership Meeting Petroleum Equipment Suppliers Assn. San Francisco, Mark Hopkins Hotel.
6– 8	Petroleum Industry Electrical Association and Petroleum Electrical Supply Association, Joint Convention, Houston, Rice Hotel.
15–16	Pacific Coast District, API Division of Production, Spring Meeting, Los Angeles, Biltmore Hotel.
22–23	Mid-Continent District, API Division of Production, Spring Meeting, Amarillo, Texas, Herring Hotel.
MAY 12–17	South American Petroleum Congress (ISAP), Lima, Peru.
15–17	National Oil Scout and Landmen's Association Annual Meeting, Roosevelt Hotel, New Orleans.

Nomads Chapter monthly meetings: LOS ANGELES, second Wednesday, Mayfair Hotel. HOUSTON, second Monday, Ye Olde College Inn. NEW YORK, first Monday, Louis Sherry's. TULSA, third Wednesday, Hotel Tulsa. DALLAS, date not yet fixed.

nal oil and gas shows passed up in the Strawn probably do not warrant setting pipe for a production test, as the section offers insufficient porosity to make a commercial producer. Humble Oil & Refining Company's Wester 1, Weston prospect, was drilling lime and shale at 4245 feet without shows.

Wilbarger County: Paradise Oil Company's Waggoner 6, SE SE H&TC 11, Block 14, and east offset to the company's discovery for the Paradise-Canyon pool, flowed 480 barrels of 38-gravity oil potential through ½-inch choke from Canyon perforations at 3138-44 feet. The company's Waggoner 2, west offset to the discovery, is idle after acidizing perforations without results.

Staley Bros. has been assigned a checkerboard spread of 1040 acres in H&TC Railroad Sects. 78, 85 and 86, Block 14, by Hammer Drilling Company for the drilling of an Ellenburger test. The area produces from the Canyon.

Foard County: Stanolind Oil & Gas Company's Halsell 1, John Shearer Survey and 7 miles south by east of Crowell, was preparing to acidize Strawn perforation at 4822-38 feet after swabbing a small volume of free oil. This wildcat was plugged back from barren Ellenburger at 5897-5912 feet.

Injection Water Treatment Is Topic at Water-Flood Session

Chemical treatment of injection water, and bottom-hole chemical treatments for the removal of "gyp" in order to increase pumping time, were discussed by northeastern Oklahoma and southeastern Kansas water-flood operators and engineers at the Booth Hotel, Independence, Kansas. W. A. Heath of Earlougher Engineering, Tulsa, presided. About 100 attended the session, including representatives from the U. S. Bureau of Mines, Bartlesville, Okla., and the U. S. Geological Survey, Tulsa.

Speakers included Paul DeLozier of Treat-Rite Chemical Co., Nowata, Okla.; Carl Pate, Oil Research Laboratory, Inc., Chanute, Kansas; and R. W. Kelly, Dearborn Chemical Co., Tulsa.

DeLozier described methods for treating water used for injection purposes and covered the subject for the Oklahoma operators. Where water-flooding is to be the method used in secondary recovery of oil he suggested (1) that operator choose a constant supply of raw water; (2) design and build the plant to handle the water in the best manner as determined by a complete analysis of the water; (3) plans for enlarging flooding pattern should also extend to the water treating plant; (4) at frequent intervals make sure the water is stable and satisfactory for injection by having frequent laboratory tests made of the water.

Conditons encountered in Kansas areas which, in some instances differ from those found in Oklahoma, were discussed by Pate, who also made specific recommendations for greater efficiency in water-flooding techniques.

Kelly told the group that considerable success has been experienced in treating pumping wells for the prevention of "gyp" by using tannin-sodium hexametaphosphate mixtures. These are applied either by pumps, lubricator or by gravity through ¼-inch needle valve in cases where there is no positive pressure. The mixtures are injected in the annulus between the casing and tubing.

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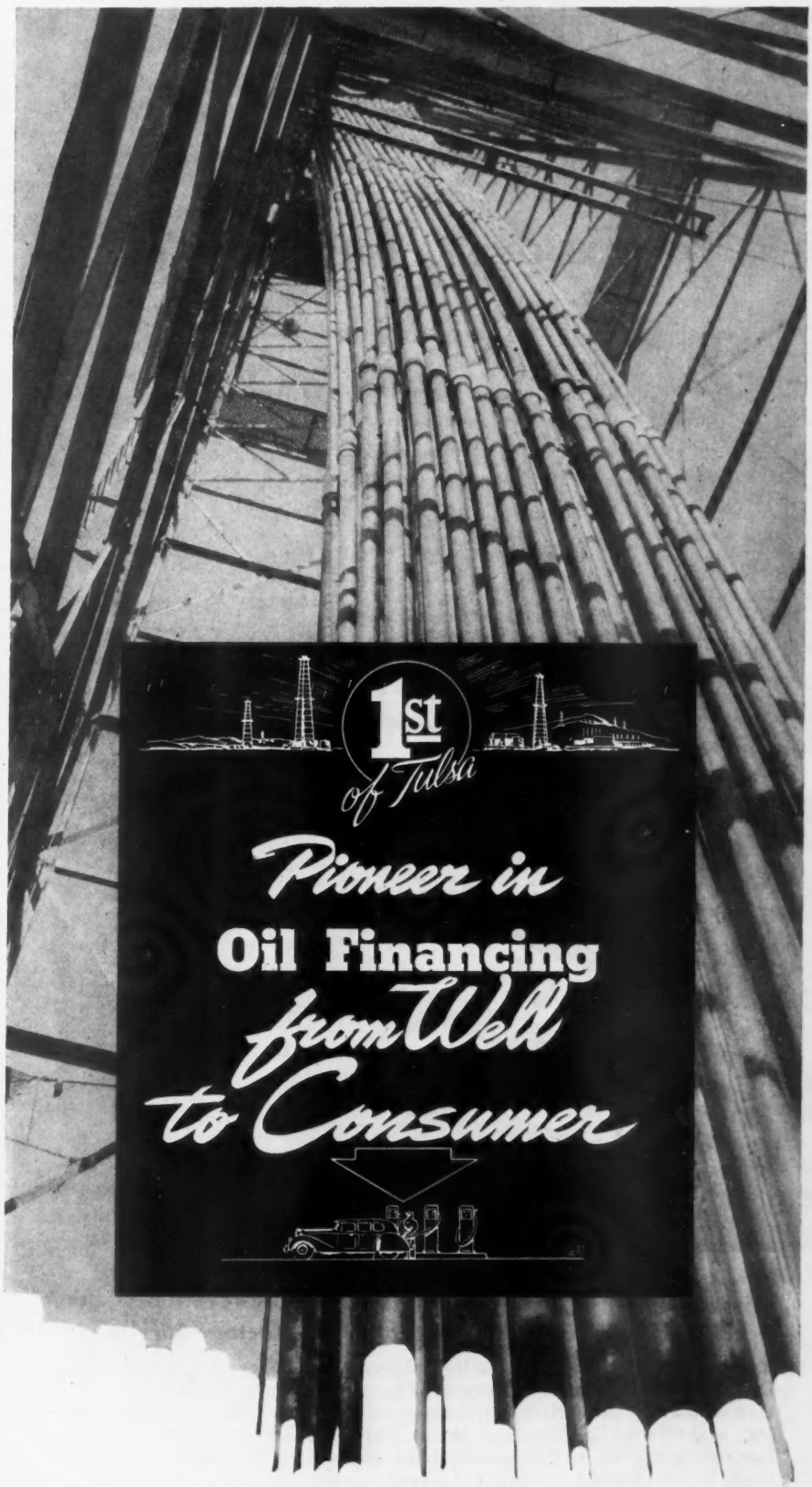

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☆ East Texas

Flynn Field Outpost to Make Producer from Woodbine

Outpost in Flynn field, Leon County, to make Woodbine producer; wild gas flow controlled by Anderson County semi-wildcat; deep prospect in Limestone County attracts interest.

Leon County: Tex-Harvey Oil Company's Powell 1, 3300 feet southeast of the largest of the producers in the Flynn area, swabbed and flowed free oil and drilling fluid to indicate commercial production from open hole at 7110-454 feet. Liner is scheduled to be set due to cavings from the predominately shale section in the Woodbine, topped at 7117 feet.

Anderson County: Blue Bird investment Company's Pearson 1, John Gossett Survey and a mile north of a Woodbine gas-distillate discovery at 5409-19 feet, killed gas and water flow developed when loss of returns caused blowout at 5038 feet, with elevation of 324 feet. Cement has been used in the lower section to try and restore circulation to deepen before running casing. The gas is believed coming from a crevice above the Austin chalk, else from sand charged with gas from other wells drilled in the area. Baker 1, W. D. Smith Survey and a Travis Peak prospect 2 miles north by east of Fallon, is credited with having logged some porosity. In drilling unidentified formation at 6681-85 feet. Testing was delayed to make rig repairs. This wildcat entered Barren Woodbine at 4060 feet with elevation of 514 feet.

Freestone County: The Texas Company's White 1, Fairfield Smackover prospect, was meeting with success in cutting out drill pipe that became stuck at 13,508 feet. The hole has been cleaned to 12,220 feet.

Smith County: Delta Drilling Company's Lyons 1, Lindale prospect that will explore the Paluxy, entered Georgetown at 6235 feet with elevation of 536 feet, and was drilling at 6370 feet.

Humble Oil & Refining Company's Dowell 2, northeast outpost for the Mount Sylvan field and an apparent failure, was making completion try after electrical formation survey revealed possibly 5 feet of effective pay in the Paluxy that was drilled to 7500 feet. Pipe was cemented at 7468 feet, and initial perforations at 7404-08 feet proved dry.

Wood County: Humble's McKnight 1, northeast edge of the Hawkins field, was drilling at 11,155 feet in Cotton Valley, topped near the 10,895-foot level. Humble's Little Sandy Club 1, Travis Peak test for the west side of the Hawkins field, was drilling Georgetown lime at 6100 feet.

Shell Oil Company's Goldsmith 12, Smackover test for the Quitman field, was drilling sand and shale at 9350 feet in Travis Peak, topped at 8425 feet with elevation of 428 feet.

Plant to Be Enlarged

Continental Oil Company will temporarily suspend operation of its 2400-barrel daily capacity skimming and cracking plant at Artesia, N. M., this month to increase the throughput to 3500 barrels daily. This plant was purchased last February from Malco Refineries, Inc., and Continental's near-by obsolete plant was dismantled.

☆ Southwest Texas

Mile Southeast Extension at La Reforma Field Completed

Mile southeast extension at La Reforma completed; Roma area wildcat to core Pettus; wildcat in Weil field area abandoned.

Starr County: Baldridge & King's A. Guerra 1-B has been completed as a mile southeast extension to the La Reforma field. Total depth is 7505 feet with 5½-inch casing set to 7400 feet and perforated for completion at 6046-56 feet in a new oil pay. Production has been turned into the tanks with no gauge taken. Previously a drill-stem test was run at this interval and the well flowed 43 barrels of oil per day, no water, through 3/16- and ¼-inch chokes with 110 pounds working pressure. Another test was made at 6007-18 feet but this sand failed to produce.

Auld & Boyd's Ramos Heirs 1, in the southwest corner of Survey 149 and 18 miles north of Roma, cored the Mirando sand, which showed a little gas. The Pettus was to be cored.

Duval County: The new gas field discovered by Tom Graham & Cam Corporation's Rosa V. de Benavides 1, in M. Arispe Grant, Lot 3, Sect. 24, has been named "Cam." The well produced on potential over 1½ million cubic feet of gas daily on open flow from perforations at 3319-25 feet.

Jim Hogg County: Cecil McSpadden's Holbein 1, wildcat 8 miles southeast of the Weil field, has been abandoned as dry at 5510 feet. No shows were reported.

ASME Session Set

Development and use of safety heads for tanks and separators will be discussed at the meeting of the Mid-Continent Section, American Society of Mechanical Engineers, February 13, in Tulsa. Gwynne Raymond, chief engineer of Black, Sivalls & Bryson, Oklahoma City, will give a brief history of the development of the safety head. He will be followed by C. E. Huff, sales manager of the Special Products Division of Black, Sivals & Bryson, Kansas City, who will talk on applications of the safety heads. He will give practical demonstrations of its value as a safety device.

Gulf AIME to Meet

Under the direction of Harold Decker, new chairman of the Gulf Coast Section, AIME, the first meeting conducted by the section's 1947 officers is scheduled February 11, in the Texas State Hotel, Houston, at 6:30 p.m. Frank Smith, assistant director of research, Pan American Refining Corporation, Texas City, will discuss "Chemical Industry's Expansion on the Texas Gulf Coast and Its Relation to the Petroleum Industry."

Chiang Honors Shell

Chiang Kai-Shek, president of the Chinese national government, has awarded the Shell organizations a scroll of thanks for the companies' work in training Chinese industrial personnel during the war. The award was made by the Chinese ambassador Dr. V. K. Wellington Koo, and was accepted by R. G. A. Van de Woude, president of Shell Union Oil Corporation.

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☆ Lower Texas Coast

Slick Production Extended in Boyce Field, Goliad County

Slick sand production extended at Boyce; discovery being completed south of Meyersville; wildcat outpost 3 miles northeast of Borregas shows for production; second producer at Clay West being completed in new pay zone.

Goliad County: Sun Oil Company's Emil Els 1 has extended Slick sand production in the Boyce field. The well flowed on completion 38½ barrels of condensate and 2 million cubic feet of gas daily through 11/64-inch choke with tubing pressure 2500 pounds and casing pressure 2700 pounds. The well is 4000 feet northwest of Magnolia Petroleum Company's Boyce 1 condensate discovery and 5700 feet west-southwest of The Atlantic Refining Company's Altman 2, nearest oil well and a Luling sand producer. The Els 1 tested a little oil in the Luling sand at 7629-44 feet but the sands did not have enough porosity and permeability to produce commercially.

DeWitt County: Continental Oil Company's Fred Ruschaupt 1 is a new gas-condensate discovery 4½ miles south of Meyersville and 1400 feet northwest of the Victoria County line. On an initial test the well flowed 1,308,000 cubic feet of gas and approximately 22 barrels of 56.3-gravity condensate daily through 3/16-inch choke. Estimated open flow potential is 2,400,000 cubic feet of gas and 40 barrels of condensate daily.

Kleberg County: Humble Oil & Refining Company's King Ranch-Borregas 8, outpost 3 miles northeast of Borregas field, is showing for production. A drill-stem test at 6234-42 feet recovered 675 feet of oil, 20 feet of oil-cut mud and 80 feet of fresh water. A second test at 6245-52 feet recovered 1124 feet of oil and 10 feet of oil-cut mud. A third test at 6253-61 feet recovered 1890 feet of oil and 10 feet of mud.

Live Oak County: Continental Oil Company's Mrs. Clay West Burns 1-A, 1867 feet north of the Clay West Burns 2 discovery at Clay West field, is being completed as the second producer for the field in a new shallow pay zone. On an initial test the well flowed 78 barrels of 40.6-gravity condensate daily through 13/64-inch choke along with 3,616,000 cubic feet of gas. Total depth is 10,275 feet with 5-inch liner set to 10,263 feet and perforated for completion at 9390-9404 feet.

Mississippi Hearing Held

A hearing on gas allowables in the Gwinville field of Jeff Davis County, Miss., is to be held by the State Oil and Gas Board in Jackson February 10.

☆ Upper Texas Coast

North Flank Production Opened At Humble Dome, Harris County

North flank production opened at Humble Dome; potential run on new Hinkle discovery in Orange County; Conroe field extended 1500 feet northeast; Humble swabbing Sandune wildcat.

Harris County: Humble Oil & Refining Company has opened production on the north flank of the Humble Dome. H. C. House 2, Mary Owens Survey, abstract 405, flowed at the rate of 162 barrels of 20-gravity oil daily through ¼-inch choke on initial test. Flowing pressure on the tubing was 125 pounds and 395 pounds on casing, oil-gas ratio being 101/1. Total depth is 5652 feet with 5½-inch casing set to 5238 feet and perforated for completion at 4678-88 feet.

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Orange County: Hinkle Drilling Company's Miller-Vidor Land Company 1, wildcat discovery on an 80-acre Gulf Oil Corporation farmout in J. M. Swisher survey, has been given potential. The well flowed 2,200,000 cubic feet of gas and 42 barrels of 53.2-gravity condensate daily through 12/64-inch choke. Flowing pressure was 2860 pounds and shutin pressure 2930 pounds. Total depth is 7910 feet with 5½-inch casing set to 7810 feet and perforated for completion at 7772-78 feet in Hackberry sands. North Vidor has been suggested as the field name for the area.

Montgomery County: The Conroe field has been etxended approximately 1500 feet northeast by S. E. McDaniel's M. W. Williams et al 1, located in WCRR Survey 13, Abstract 645. The test cleaned on initial test 450 to 500 barrels of oil daily through ¼-inch choke with 350 pounds flowing pressure on tubing. Total depth is 5177 feet with 5½-inch casing set on bottom and perforated for completion at 5060-68 feet in the regular Cockfield pay of the field. This pay depth is about the same as that in the Conroe field and indicates that other producers may be finaled in its direction.

Liberty County: Humble is swabbing John Tarlton Trustee 1, wildcat 4 miles southeast of Sandune Townsite and 5 miles west of Hull field. Total depth is 10,036 feet with 5½-inch casing set to 10,004 feet with hole being tested below the casing seat.

☆ South Louisiana

Production Test Scheduled For Holmwood Area Wildcat

Sohio testing Holmwood wildcat; Magnolia completing fourth Singer producer; Welsh outpost testing; Florence area blowout controlled; Magnolia to test Gulf of Mexico wildcat.

Calcasieu Parish: Sohio Petroleum Company is testing the Farmers Land and Canal Company 2, wildcat in the Holmwood area, 26-10s-7w. Total depth is 11,250 feet and hole has been plugged back inside the 7-inch casing, cemented to 10,874 feet. Perforations have been made at 10,412-17 feet for production test. Other sands with shows were logged at 10,320-31, 10,350-70, and 10,780-90 feet. This wildcat is ¼-mile southeast of the No. 1 dry hole and 5 miles west-southwest of production in the Bon Air field, Jeff Davis Parish.

Beauregard Parish: Magnolia Petroleum Company's Lutcher-Moore 3-C is being completed as the fourth producing well in the Singer field, a 1946 discovery. On a drill-stem test of perforations at 7640-44 feet, using ¼- and ⅛-inch chokes, the well flowed at the rate of 100 barrels of oil daily with 820 pounds pressure. Total depth is 8150 feet with 5½-inch casing set to 7772 feet.

Jeff Davis Parish: Stanolind Oil & Gas Company's T. S. Stegal 1, outpost on the northwest flank of Welsh field, is preparing to make production tests. Drilled to total depth of 8233 feet, hole has been plugged back inside the 7-inch casing, cemented at 7585 feet. A drill-stem test run prior to setting casing flowed oil and gas.

Vermilion Parish: Stanolind Oil & Gas Company's E. M. Watkins 1, wildcat 6 miles east of Florence townsite in 23-13s-1w, has been controlled after blowing out. The wildcat hit a strong

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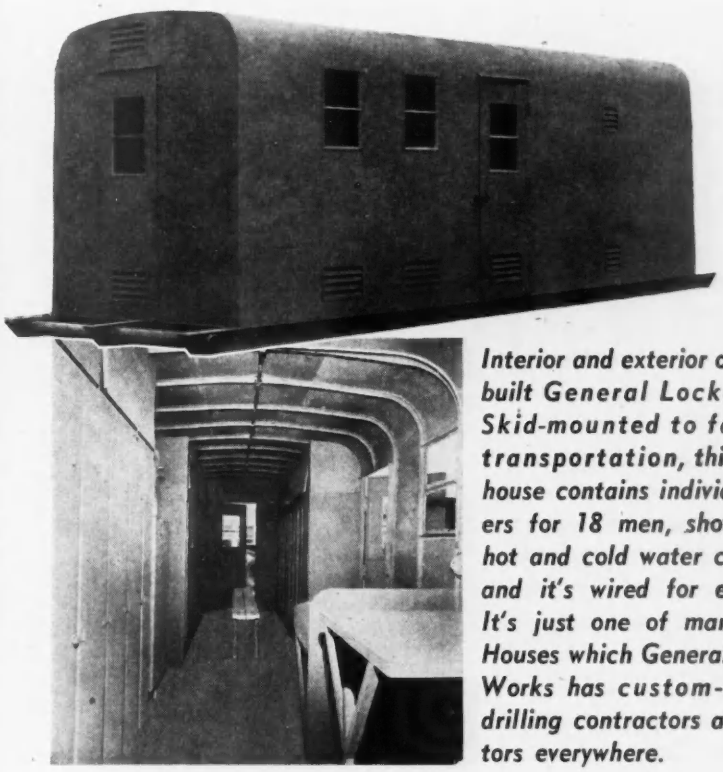

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gas and salt water flow while drilling at 11,115 feet and blew out. Drill pipe is still in the hole and a fish job is expected.

Terrebonne Parish: Magnolia will test State 1, Lease 673, wildcat in the Gulf of Mexico in Tract 474, Block 58. Total depth is 12,874 feet and cement plugs were set at 11,300-500 and 9976-10,086 feet before it was decided to test. Cement has been drilled out to 10,228 feet.

Louisiana Hearing Slated

Louisiana's Department of Conservation will hold its statewide oil and gas proration hearing in Baton Rouge on February 13, when evidence will be received relative to setting the field allowables for the 61-day period of March and April, 1947.

☆ North Louisiana

Promising Wildcat Reacidizes In Effort to Revive Oil Flow

Possible wildcat discovery acidizing to revive flow of oil; Logansport area test blows out; Madison wildcat shut in after shows of gas.

De Soto Parish: Rogers Lacy's Pace 1, C SE NW 28-13n-16w, wildcat 4 miles west of Longstreet, is reacidizing perforations at 6330-40 feet in the Pettit, through which the well flowed oil and acid water by heads and then died. The well was shut in for 24 hours and flowed an unestimated amount of oil into pits when opened. Perforations in the Travis Peak had previously flowed 50,000 cubic feet of dry gas on drill-stem test.

Skelly Oil Company's Thelma Nash 1, 2-12-16, 3½ miles northwest of Logansport and 2 miles from production, blew out at 2930 feet as a wild gasser and caught fire. It was estimated to be making 5 million cubic feet of gas. Operators have not determined whether the well hit a gas pocket or is opening a shallow gas field in the Logansport area. There was some belief that the well is making oil as well as gas. The test is scheduled for 7500 feet.

Madison Parish: Curtis Kinard's wildcat, Ayer Timber Company 1, C NW SW SW 19-15n-10e, perforated with 2J shots at 5630-39 feet and ran tubing. It was then shut in after flowing an unestimated amount of gas while operators set up tanks and separators.

☆ Arkansas

Second Producer Is Finaled In West Lewisville Field

Second producer for West Lewisville finaled; third completion has shows in shallower zones; 2 significant wildcats in Ouachita County fail.

Lafayette County: The second producer for the West Lewisville field was completed by McAlester Fuel Company, as Rook A-1, C SE NE 17-16s-24w, pumped an initial gauge of 257 barrels of 31-gravity oil per day. Production is from 56 perforations at 3919-33 feet, a different pay zone than the discovery well's. Rook A-1 is a west offset to the discovery. Total depth is 4400 feet.

A south offset to the field discovery shows indication of completing as a producer from still a third producing horizon. Henry F. Briley's Owen 1, C NW SW 16-16s-24w, cut a fault at 2435 feet and logged oil shows in both the Tokio and Paluxy sands, shallower pays than the Kilpatrick section of the Rodessa, the discovery pay. Owen 1 is bottomed at 4080 feet and is preparing to test.

Ouachita County: Mid-Continent Petroleum Corporation abandond J. P. Weaver 1, 21-14s-19w, wildcat 4 miles south of Troy field, at 3565 feet. It was on a fault line play and supposedly an extension of the Troy fault.

Charles Wampler's F. E. Burton Estate 1, C SW SE NW 30-15s-17w, 3 locations north and 1 location west of the Pace City discovery pumper, was abandoned at 3464 feet. This would seem to indicate that the field reservoir will be small.

☆ Mississippi

Lincoln County's Brookhaven Field Extended Northeast

Brookhaven extended northeast; Jones County prospect continues encouraging; Yazoo test abandoned.

Lincoln County: The California Company's Robert H. Boling 1, NEc 33-8n-7e, has been completed to extend the Brookhaven field another mile northeast. The Bolling developed a 104-foot section of saturation in the Lower Tuscaloosa at 10,344-448 feet and perforated with 432 shots to establish production. On initial test the flow was 369 barrels of 34-gravity oil per day. Crescent Drilling Company's J. F. Vernon 1, SEc 31-8n-7e, another outpost, was still trying to eliminate salt water. The well was pumping about 5 barrels of fluid an hour, 38 percent water. Also com-

Report to the Comptroller of Currency of the Condition of the Frost National Bank at the close of business Tuesday, Dec. 31, 1946

RESOURCES

CASH		$ 31,903,229.89
U. S. Government Obligations (all carried at par or less)		83,506,528.10
Investment Bonds and Municipal Obligations (all carried at par or less)		3,460,015.00
Stock in Federal Reserve Bank		120,000.00
Loans and Discounts		13,192,778.63
Interest Earned but not Collected		301,723.77
Customers' Liability Account Letters of Credit		143,975.96
Building Account		837,757.16
Other Real Estate Owned		1.00
TOTAL		**$133,466,009.51**

LIABILITIES

Capital Stock		$ 1,200,000.00
Surplus		2,800,000.00
Undivided Profits—Net		247,091.61
Reserve for Undeclared Dividends		96,000.00
Reserve for Taxes, Interest, etc.		404,728.57
Interest and Discount Collected but not Earned		33,815.97
Liability Account Letters of Credit		185,011.28
DEPOSITS: Commercial	$75,733,067.79	
Correspondent Banks	16,476,311.04	
Time	21,009,022.31	
Public Funds	13,205,149.01	
United States Government Deposits	1,091,466.36	
Other Deposits, Certified & Cashier's Checks, etc.	984,345.57	128,499,362.08
TOTAL		**$133,466,009.51**

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pleted in Brookhaven was California's Brookhaven Bank & Trust Company Unit 1, NEc 9-7n-7e, which on initial test flowed 947 barrels of oil per day.

Jones County: Gulf Refining Company's L. L. Majors 1, SEc NE 29-6n-11w, rank wildcat which has shown promise, continues to run core tests in exploration of lower sections. A drill-stem test at 8529-39 feet had a good blow but recovered only 34 feet of fluid, of which 10 percent was 10-gravity oil. Bottom hole foot pressure was 20 pounds and hydrostatic pressure 4710 pounds. Cores from 8556-61 feet showed fair porosity and good saturation of heavy oil.

Yazoo County: The Carter Oil Company's Carl Day 1, C NE NE 9-12n-3w, Tuscaloosa prospect which held considerable promise, has been abandoned. Fair saturation was noted in several intervals of the Eutaw and Tuscaloosa zones with gas odor indicated at 6459, 6477 and 6497 feet. Sections at 6476, 6510 and 6554 feet also yielded oil stain and odor. The well was abandoned at 7004 feet. Don Reese's Fouche 1, NEc NW NE 22-12n-1w, which is being deepened as a result of the findings in the Day, is drilling below 7498 feet with no shows reported.

Amite County: Gulf's J. A. Rowland A-1, SWc NW 39-4n-2e, is drilling below 11,097 feet with no shows reported. Cores from 10,747-54 feet recovered medium grained lignite with fair porosity and considerable salt water content.

Lamar County: Sun Oil Company's F. M. Snowden 5, NWc NE NE 7-1n-16w, Baxterville field, has been successfully completed for a 1000-barrel well, the field's best. Casing was set to 9738 feet in the Massive sand zone and a section at 9708-33 feet was perforated with 200 shots. On initial test, well flowed 1043 barrels of oil through 5/16-inch tubing choke. The Texas Company's Mrs. G. W. Bilbo 2, NWc SE SE 8-1n-16w in Baxterville was installing pump for completion after lower Tuscaloosa zone was acidized to establish production. Previously, the well flowed on gas lift at the rate of 30 barrels per day. With these 2 wells and 12 other operations, Baxterville is currently one of the state's most active fields.

Florida

Humble Oil & Refining Company's Gulf Coast Realty 9, C SE 24-48s-29e, Sunniland field of Collier County, is at 11,590 feet waiting on orders after tests of potential productive zone failed to yield encouragement. A drill-stem test at 10,560-11,563 feet recovered only mud.

Monroe County: Gulf Refining Company's State of Florida 1, wildcat in 2-67s-29e, Pine Key Prospect, is drilling 14,512 feet in dense lime, still without shows.

Alabama Production Down

The Alabama Oil and Gas Board reported that 28,730 barrels of oil were produced during December as compared with 30,999 barrels for the previous month. This represents the production from the Gilbertown and East Gilbertown fields in Choctaw County. During the entire year production amounted to 380,035 barrels which is more than twice as much as the total cumulative production prior to that time. There are 27 producing wells now working in the Gilbertown fields, all drawing from the Eutaw reservoir.

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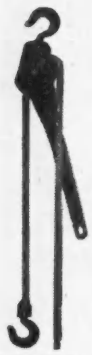

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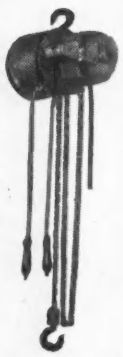

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☆ Illinois Basin

Abandoned Pittsfield Pool, Illinois Is Site of Test

Test being drilled in abandoned Pittsfield gas pool, Pike County, Illinois; Effingham County wildcat tests McClosky; Concord pool, White County, extended; Tunnel Hill pool, Henderson County, Kentucky, given new pay zone.

Illinois

An interesting test for gas and possibly oil is being started by Panhandle Eastern Pipeline Company in Pike County, 80 miles northwest of St. Louis in the abandoned Pittsfield gas pool, which was discovered in 1886 and produced from an average of 265 feet.

Panhandle has located a test in the NE NW 21-5s-4w, 4th P.M. and plans to use cable tools to drill to 3100 feet. Location of the test is 10 miles north of the company's main natural gas line to the east and near the town of Pittsfield, which Panhandle serves with gas.

Effingham County: National Associated Oil Company's Jacobs 1, SE SW SW 24-6n-6e, approximately 2 miles west of production in the Bible Grove pool, is testing McClosky at 2825-35 feet (estimated, since well is semi-tight) after 1000 gallons of acid. Well swabbed 130 barrels of oil in 24 hours after acid application.

White County: Allen's Ackerman 1, NE NE SW 4-7s-10e, a mile south of the Concord pool, was completed for 135 barrels daily on pump from Aux Vases sand at 2900-10 feet.

Marion County: National Associated Oil Company's Boye 1, NW NE NW 21-4n-4e, a prospective pool opener, five miles east of Kinmundy, is testing Aux Vases sand at 2202-13 feet after a shot. Prior to shot the well swabbed about 1 barrel of oil hourly.

Kentucky

The Tunnel Hill pool, Henderson County, discovered about a year ago by The Carter Oil Company, has been given a new pay zone by the same operator. The new horizon was found at the company's Melton 1, 4-N-23. During a drill-stem test, the well yielded 690 feet of oil and 240 feet of oil-cut mud from Waltersburg sand at 1766-86 feet. The well is drilling ahead for Cypress sand which previously was the field's only productive zone.

☆ Ohio

Muskingum County's Blue Rock Township Has Oil Discovery

Oil discovery made in Blue Rock Township; another gas well noted in northern Salt Creek; Meigs County wildcat is dry in Oriskany; Woodsfield area has extension.

Muskingum County: Nollem Oil and Gas Company struck oil in Rolla H. Hartman 1, SE SE 34, Blue Rock Township. Top of the Clinton sand was logged at 4551 feet and pay from 4553-71 feet, with the bottom near 4610 feet. The sand was continually swabbed while being drilled in until tankage was full. An unofficial estimate of 100 barrels per day natural has been made with 3500 feet of oil in the hole. A large wildcat gas well was discovered 2 miles northeast of this well in December.

Industrial Gas Corporation's Everett Coffey 1, SE NE 15, Salt Creek Township, was stopped at 4103 feet or 11 feet in the Clinton sand with a natural gauge of 2,300,000 cubic feet gas. The gas may be produced at this depth before drilling on to the Medina sand.

Meigs County: W. I. Gettman's Chas. E. Peoples 1, an Oriskany sand wildcat in the eastern part of Lebanon Township, found only a thin streak of sand at 4149-50 feet, which had a show of gas. The well was drilled to 4172 feet and shut down.

Monroe County: Several wells have been started in the new Berea sand gas pool near Woodsfield in Center Township, which is now extended ½-mile south by Kirkman and Spence's Mary A. Strickling 1, NE SE 21. The sand was reached at 1928 feet and at 1936 feet the gauge was 1,600,000 cubic feet of gas with a rock pressure of 700 pounds.

☆ California

Kettleman Hills Middle Dome Discovery Rated Important

Kettleman Hills Middle Dome oil discovery is of major importance; deep test to be drilled in McKittrick area of Kern County; Edison well may extend Wicker zone production north; second outpost to be drilled on west side of Trico gas field.

Kings County: Immediate reaction to the discovery of a new producing zone on the Middle Dome of Kettleman Hills by Standard Oil Company of California in Middle Dome 73-30V, 30-23s-19e, is that it is of major importance. Production gauge on a short test was 500 to 1000 barrels of 35-gravity oil. About 1000 feet of formation is believed open and pressures are very great.

While Standard stated that the successful test indicated a new field from sands of Eocene age, the well could also be producing from the Lower Vaqueros, the Kreyenhagen or the McAdams formations.

Standard acted as operator in drilling the well for the Middle Dome Corporation, a unit plan. Participating members are Standard, holding a 74.36 percent interest, and Bolsa Chica Oil Corporation, holding the balance of 25.64 percent. Participating acreage, considered proven at the time the unit plan was made about 15 years ago (1170 acres), is included within a red line. An outer blue line is supposed to define the limits of possibly productive acreage. Oil companies with acreage between the red and blue lines are non-participating members of the Middle Dome Corporation. Pacific Western Oil Corporation is the only company presently in this category.

Plans for further drilling will not be known for 30 to 60 days, or following consultations with the Department of the Interior, which is interested as a landowner.

Previous production on the Middle Dome was from 8 wells drilled many years ago to the Temblor (Miocene) and which had a rapid decline and are no longer producing.

Kern County: E. A. Parkford is preparing to drill a deep test in the Mc-

Kittrick area, to be located in 22-30s-22e just east of the town of McKittrick.

Honolulu Oil Corporation and General Petroleum Corporation will drill Derby 1, a joint test off the southeast end of the Mountain View field in 15-31s-29e. This area has seen considerable prospecting in recent months. The activity has been stimulated by the recent discovery of production in the schist by Western Gulf Oil Company's DiGiorgio 1, Sect. 10.

On the west side of the Edison field, Oceanic Oil Company may have established a northerly extension of Wicker zone production in its Osborne 2 in 15-30s-29e. Nineteen stands of clean oil were recovered on a test of an interval in the Wicker between 3640 and 3704 feet. The well is bottomed 8 feet in fractured schist which is believed to be productive here as it was in the company's Osborne 1. Seven-inch casing has been set at 3650 feet. Top of the schist was placed at 3706 feet.

Tulare County: Lebow and McNee have staked McDonald 1 about 1¾ miles southeast of their recently abandoned Hacienda 1 outpost test which sought production on the west side of the Trico gas field. In the productive area of the field, 6-24s-23e, Shell Oil Company completed Alpaugh Unit 3, flowing 6,600,000 cubic feet of gas from the Upper Mya zone and 4 million cubic feet from the Lower Mya.

Santa Barbara County: Signal Oil Company's State 208-11 at the westerly end of the Elwood field in 8-4n-29w is currently flowing 250 barrels of 38-gravity oil. This is a westerly extension of Sespe production. The well was whipstocked under the ocean from a state tidelands location on shore. Company has spudded State 129-12.

Stanolind Buys Wells

Stanolind Oil & Gas Company, Tulsa, increased its holdings in the Rangely field through purchase of two leases and two producing wells from Algord Oil Company for $1,080,000. Algord is owned by the Guiberson interests, Dallas.

The properties include the east half, northeast of 18-2n-10w, on which there are two producing wells, and 380 acres of the Katy Fair tract on the edge of the field. These wells are flowing 150 barrels daily each.

☆ Rocky Mountain Area

Corley Dome, Wyoming, Deep Test Fails In Madison Try

Corley Dome, Wyoming, deep test may be plugged back after failing on Madison test; new pay discovery likely in Hidden Dome field; Neiber Dome strike flowing 30 barrels per hour; Rangely field, Colorado, outposts fail in Weber.

Wyoming

Continental Oil Company's deep test on Corley Dome is a disappointment in the Madison Vannoy 3, SW SW SE 34-44n-93w, Hot Springs County, topped the Madison at 4880 feet and on drill-stem test at 4880-948 feet recovered only 50 feet of drilling mud in 15 minutes. The formation has been hard and tight and had only a slight amount of staining. Corley Dome was a discovery in 1946, and two wells have been completed by Continental in the Embar

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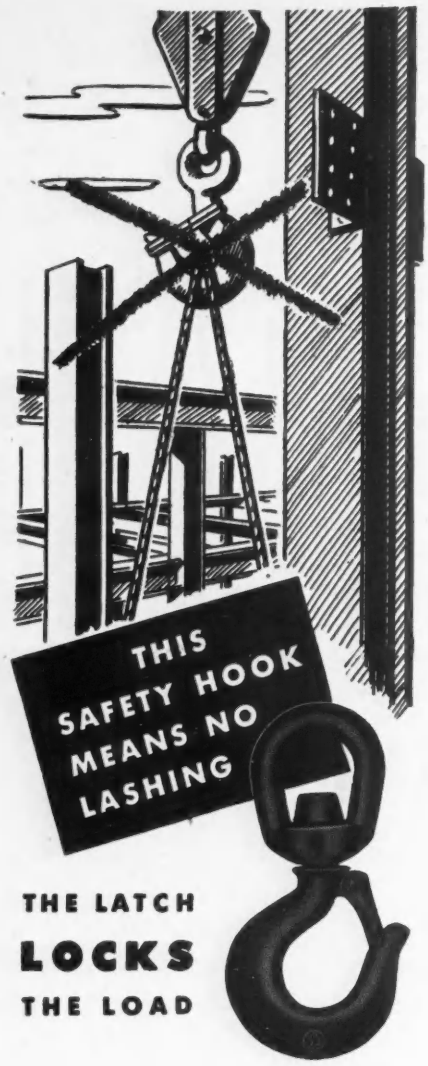

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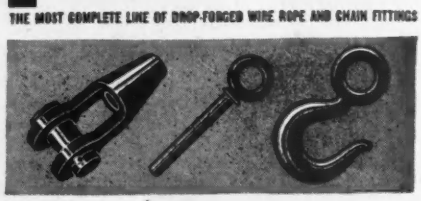

formation. The present test probably will be plugged back to that horizon for a producer.

Washakie County: A discovery in a deeper pay on a known structure is likely in The Ohio Oil Company's test in the Hidden Dome field. The well is No. 2 Tp OPC 2, NW SE SE 31-48n-90w, and Embar line was topped at 4241 feet, with saturated section to 4300 feet. On drill-stem test 4245-300 feet, open 1 hour, the well made 250 feet of oil, 150 feet of oil-cut mud and 50 feet of drilling mud. The oil is 26 gravity. Operator is drilling for the Tensleep formation expected at around 4550 feet, another objective. The Hidden Dome field was discovered in 1917 in the Frontier formation by a well which made an estimated 50 million cubic feet of gas on open flow daily in that sand at 1500 feet, total depth. In 1932 a well on the north end of the structure found green 42-gravity oil in the Frontier, some 300 feet lower structurally than the gas wells on top of the dome. Twenty-five wells have been drilled to the Frontier formation and that horizon is now almost depleted both as to gas and oil. Completion of the well will undoubtedly call for considerable drilling in the area, as the field is not unitized.

The discovery at Neiber Dome, 12 miles southwest of Worland in the Big Horn Basin at G & G Drilling Company's Unit 1, SE NE NW 19-45n-92w, has been reconditioned and is now reported flowing 30 barrels of 42-gravity oil per hour. This has been an important deep basin test on a large surface structure, and operations have continued steadily for more than 14 months. The well was drilled to 10,980 feet in the Madison and plugged back to Embar for the above test. Casing was perforated with 6 holes per foot opposite the Embar between 10,025-95 feet and the well flowed approximately 40 barrels of oil with an estimated 5 million cubic feet of gas for the first four hours. However, after that test the combination of high pressures and gas condensates froze ice and plugged the tubing and it was necessary to run 5-inch liner to 3000 feet between the tubing and 7-inch casing and circulate hot oil to keep the tubing free of ice.

Colorado

Continental Oil Company has completed drilling 2 west outposts in the Rangely field, Rio Blanco County. Rooth 3, C NE NE 27-2n-103w, was drilled to 7175 feet, total depth, 499 feet in the Weber sand, and on drill-stem test 7063-175 feet recovered more than 1000 feet of salt water in 2 hours. This test topped the Weber at 6676, which should have found more than 75 feet of Weber sand above the water level on this side of the field. However, sand conditions in the upper Weber had changed and no saturation was logged. The test will be abandoned at its present depth as the second dry hole in the Weber to be drilled at Rangely. The same company Rooth 4, C NW NW 22-2n-103w, 2 miles northwest of No. 3, also failed in the Weber after drilling to 7256 feet. Weber was topped at 6915 feet, more than 200 feet lower than the north offset, and Continental is now plugging back to perforate casing opposite the Shinarump section topped at 6233 feet. Shinarump showed some saturation when drilled, but 3 drill-stem tests in this section failed.

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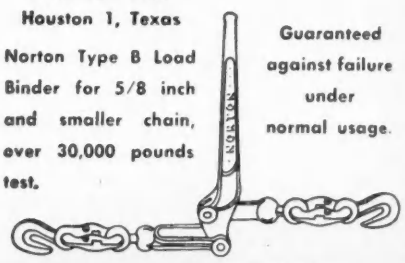

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ARKANSAS WILDCATS

Drew County—Failure: A. L. Cochran's John A. Cooper 1, ne ne nw 7-11s-4w, 1 mi s Winnchester, Wilcox 1830, Midway 3020, Arkadelphia 3652, Nacatoch 3940-4153, Tokio 4332-76, abnd 1-25-47 at 4396.

Ouachita County—Failure: Mid-Continent's J. P. Weaver 1, 1650 fr nl 2310 fr el 21-14s-19w, 4 mi se Troy fld, Arkadelphia 1255, Nacatoch 1378, Saratoga 1654, Annona 1879-1929, Tokio 2299, James 2591, abnd 1-25-47 at 3588.

CALIFORNIA WILDCATS

Kern County—Failure: Standard's Tyson 1-3, 20-28s-27e, Premier area, abnd 1-26-47 at 3460.

Tulare County—Failure: J. L. Smith, R. H. Larson and Gene Reid Drlg. Co.'s Smith 1, 7-23s-28e, Terra Bella area, abnd 1-27-47 at 588.

Orange County—Failure: Almeria Industries Co.'s 1, 20-6s-8w, Irvine area, abnd 1-29-47 at 2343.

CALIFORNIA OUTPOST

Santa Barbara County—Elwood Sespe Extension: Signal O&G Co.'s State 208-11, 8-4n-19w, tidelands lease, perf 5850-90, 5700-5790, flow 249 bbls 38.1-gr oil, 10/64-in, tp 450 lbs, cp 1500 lbs, comp 1-27-47 at 8116.

CALIFORNIA NEW PAY TEST

Kings County—Eocene Oil Discovery: Standard of California, Operator for Middle Dome Corp.'s 73-30V, 30-23s-19e, flow 500-1000 bbls 15-gr, comp 1-26-47 at 12,389.

ILLINOIS WILDCATS

Richland County—Failure: Joe Bauer et al's Doll 1, sw nw nw 35-3n-11w, abnd 1950.

White County — Failure: Lohman-Johnson Drlg. Co.'s Hill 1, se se se 28-7n-9e, abnd 3120.

INDIANA WILDCATS

Gibson County—Failures: Justrite Drlg. Co.'s Blair 1, sw sw sw 28-2s-13w, abnd 2889.

Justrite Drlg. Co.'s Blair 2, 28-2s-13w, abnd 2895.

Justrite Drlg. Co.'s Market 1, ne nw nw 10-4s-10w, abnd 2267.

Harrison County—Failure: Stoll O&R Co.'s Sutton 1, nw nw nw 15-5s-5e, abnd 745.

Posey County — Failure: Nat. Assoc. Pet. Co.'s Dennis 1, sw sw ne 3-8s-14w, abnd 2724.

KANSAS WILDCATS

Ellis County—Oil Discoveries: Continental's Mortgage 1, se ne ne 3-11s-18w, flow 3000 bbls fr Arbuckle, 3617-22, td 3625.

Skelly's Allen 1, se se sw 22-11s-19w, flow 323 bbls fr Arbuckle, 3637-45, td 3645.

McPherson County—Gas Discovery: W. C. McBride's Waln 1, ne ne se 12-19s-1w, flow 2,836,000 gas fr Lansing, 2870-75, td 2875.

Marion County—Failure: Kiowa Drlg. Co. et al's Weinbrenner 1, ne ne nw 36-19s-1e, abnd 3249.

Seward County—Gas Discovery: Stanolind's Feather 1, sw sw ne 15-35s-33w, flow 4,965,000 gas fr Pennsylvanian, 6157-85, td 8100.

Sheridan County—Failure: Royer & Farris' Morgan 1, ne se se 5-9s-26w, abnd 4008.

KENTUCKY WILDCATS

Breckenridge County—Failure: J. Carter's Green 1, 7-P-20, abnd 2675.

Henderson County—Failures: Carter's Cottingham 1, 23-O-23, abnd 2715.

Carter's Rapier 1, 24-P-23, abnd 2715.

NORTH LOUISIANA WILDCAT

Bossier Parish—Failure: J. B. Blanchard's Van Hook 1, 1676 fr sl 330 fr wl 34-20n-11w, base Saratoga 1300, base Annona 1584, Blossom sand 1834, Paluxy 2487, Glenrose 2704, abnd 1-20-47 at 3110.

SOUTH LOUISIANA WILDCAT

Beauregard Parish—Failure: Union of Calif.'s Columbia Ld. & Timber Co. 1, 1980 n 660 e of swc 27-6s-13w, 2 mi s Bancroft fld, abnd 1-31-47 at 8621.

SOUTH LOUISIANA NEW PAY TEST

Iberia Parish—Weeks Island Oil Discovery: Shell's Myles Salt Co. 1, 37-14s-6e, pay 12,373, perf 60 shots 12,380-95, flow 446 bbls 3-gr oil, 0.1% wtr, 10/64-in, gor 1253/1, tp 2575, comp 1-17-47 at 12,415.

MICHIGAN WILDCATS

Allegan County—Failure: J. W. Lang Co.'s Crane 1, ne se nw 6-1n-15w, abnd 1-19-47 at 1214.

Clare County—Failure: S. C. Hindman's Krabill 1, se se se 22-17n-6w, Dundee lime 4018, abnd 1-22-47 at 4084.

Gladwin County—Failure: Otis C. Mutch's Gerring 1, ne nw sw 10-18n-1e, Dundee lime 3580, abnd 1-24-47 at 3745.

Lake County—Failure: Byron MacCallum's Lake County Farm 1, sw sw ne 10-17n-11w, Dundee 3579, abnd 1-24-47 at 3769.

Mecosta County—Failures: Sun's Harper 1, ne sw ne 31-16n-7w, Dundee dolomite 3846, abnd 1-22-47 at 4016.

Michigan Consolidated Gas Co.'s Bliss-State 1, e½ nw 17-15n-7w, abnd 1-21-47 at 1433.

Montcalm County—Failures: Gordon Oil Co.'s Powell 1, nw ne ne 2-11n-8w, Dundee lime 3350, abnd 1-25-47 at 3490.

C. A. Perry's Whitmore 1, (OWDD) se sw nw 18-9n-5w, otd 2765, abnd 1-25-47 at 3268.

MICHIGAN OUTPOST

Allegan County—Monterey Extension: Fisher-McCall O&G Co.'s Bally 1, sw sw sw 17-3n-13w, elev 819, Traverse lime 1649, pump 21 bbls a nip, comp 1-19-47 at 1684.

MISSISSIPPI WILDCATS

Hinds County—Failure: Kingwood's Lewis 1, ne sw 14-5n-1w, abnd 1-14-47 at 3714.

Issaquena County—Failure: Warren Pet. Co.'s Jane S. Heath 1, ne c 9-10n-8w Wilcox 1838, Gas Rock 3425, L Glen Rose 3466, abnd 1-27-47 at 4306.

Marion County—Failure: Humble's J. R. Tolar 1, sec 28-5n-19w, abnd 1-25-47 at 10,151.

Yazoo County—Failure: Carter's Carl Day 1, c ne ne 9-12n-3w, Wilcox 1977, Woodruff sd zone 5139, Eutaw 5287, Tuscaloosa 6257, abnd 1-27-47 at 6505.

MISSISSIPPI OUTPOST

Lincoln County — Brookhaven Extension: California's Robert H. Boling 1, NEc 33-8n-7e, 1m ne prod, flow 369 bbls 34-gr, 432 shots at 10,344-08 ft in L Tuscaloosa, comp 1-25-47.

MISSOURI WILDCAT

Gentry County—Failure: Dan Short's Howatt 1, sw sw ne 9-61n-32w, abnd 1180.

NEW MEXICO WILDCAT

Chaves County—Failure: Fred Pool et al's Denton 1, c se ne 35-5s-27e, elev 4110, Gray-

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burg 1735, San Andres 1949, abnd 1-29-47 at 2402.

NEW MEXICO NEW PAY TEST

Lea County—Hobbs Deep Failure: Sun's McKinley 1-B, (OWDD) sw sw ne 20-18s-38e, otd 4242, elev 3657, Glorietta 5580, Clear Fork 6010, Tubb 6590, abnd 1-30-47 at 8010.

OHIO WILDCAT

Tuscarawas County—Failure: Ohio Fuel Gas Co.'s Cecile Cramlet 1 ne se 13, abnd 1-21-47 at 5077.

OKLAHOMA WILDCATS

Beaver County—Failure: Gulf's Ratzlaff 1, se se nw 9-3n-21eCm, abnd 8920.

Carter County—Failure: Amerada's Smalley 1, ne ne ne 19-4s-3w, abnd 6852.

Comanche County—Failures: Sam Brince et al's Haskins 1, se se ne 28-1n-10w, abnd 2450.

George J. Collins' Huddleston 1, nw nw se 11-1s-14w, abnd 2052.

Cotton County — Oil Discoveries: Bridwell O&G Co.'s Ko-port 1, c e½ sw nw 25-3s-11w, pump 16 bbls fr Pennsylvanian, 1477-82, td 1482.

Martin Properties' Dyer 1, sw sw se 33-2s-11w, pump 76 bbls fr Pennsylvanian, 1650-53, td 1656.

H. A. Hamilton's Bates 1, nw nw se 17-3s-11w, pump 15 bbls fr Pennsylvanian, 1580-82, td 1586.

D. Candy et al's Taylor 1, sw se sw 34-3s-11w, pump 70 bbls fr Pennsylvanian, 1445-48, td 1448.

Cotton County—Failures: Knight & Hastings' Parks 1-A, ne ne ne 15-2s-11w, abnd 2208.

R. G. Anderson's Musgrove 1, ne ne ne 21-2s-11w, abnd 2208.

J. F. Richardson's Gandy 1, se se nw 30-3s-9w, abnd 2020.

Kingwood Oil Co.'s Dugan 1, ne ne sw 1-3s-11w, abnd 2517.

Joe Moore's Neal 1, se se se 12-4s-12w, abnd 2107.

Akin & Dimock's Miller 1, ne se ne 1-5s-13w, abnd 2402.

J. Ben Russell's Zachary 1, se ne se 29-3s-10w, abnd 1682.

C. P. Burton's No-wook-ah-her 1, se se se 12-3s-12w, abnd 1571.

Shriber & Browning's Powell 1, ne nw se 20-4s-11w, abnd 2212.

Bridwell Oil Co.'s Top-pi 1, sw nw sw 12-5s-12w, abnd 2886.

D. H. Bolin's Kinnaird 1, sw sw ne 26-5s-12w, abnd 2514.

Garfield County — Failures: Herndon Drlg. Co.'s Bennett 1, c n½ nw se 25-20n-4w, abnd 4608½.

Anderson-Prichard Oil Corp.'s Donohoe 1, se sw se 28-21n-4w, abnd 4758.

Garvin County—Failure: Sohio et al's Goldfeder 1, ne ne sw 9-3n-1w, abnd 4650.

Jefferson County—Failure: Farris & Rhodes' Bowles 1, sw se se 32-3s-8w, abnd 2810.

Lincoln County—Oil Discovery: Danolger et al's Shaffner 1, c ne se 7-13n-6e, pump 8 bbls fr Simpson, 4370-4428, td 4450.

McClain County—Oil Discoveries: C. L. Carlocks' Ainsworth 1, ne nw se 26-5n-4w, flow 662 bbls fr Hunton lime 9892-9940, td 9940.

Woods Oil Co. et al's Henderson 1, se ne nw 14-5n-2w, pump 33 bbls fr Pennsylvanian, 7097-7123, td 7123.

McIntosh County—Failure: Kerr-McGee Industries' Autrey 1, c se nw 10-9n-13e, abnd 3497.

Murray County—Failure: Kerr-McGee Industries' Short 1, nw nw se 19-1n-2e, abnd 2567.

Oklahoma County—Gas Discovery: Peppers Ref. Co.'s Martin 1, c sw ne 20-13n-2w, flow 17,700,000 gas fr Bartlesville, 6065-84, td 6084.

Payne County—Failure: Mid-Western Drillers & Associates' Fennell 1, c nw se 30-19n-1w, abnd 5636.

Stephens County—Failure: Nu-Enamel Operations' Henderson 1-A, ne ne sw 11-1n-4w, abnd 615.

Tillman County—Failures: S. D. Johnson's Tindale 1, se ne nw 18-3s-14w, abnd 2250.

J. R. Meeker's Knaust 1, se se nw 30-3s-16w, abnd 3251.

WEST TEXAS WILDCATS

Garza County—Failure: Midland Oil Corp.'s Eubanks 2, ne ne ne W. C. Ry. 15, blk 4, elev 2475, lime 2012, abnd 1-30-47 at 3250.

Hale County—Oil Discovery: Stanolind's Fisher 1, c sw sw E. L. & R. R. 5, blk CL, 19 mi e by n of Irish fld, elev 3316, Permian 1045, anhydrite 1260 ft, San Andres 2620, Tubb 4655, Wichita-Albany 4995, base dolomite 5785, Pennsylvania 6885, flow 1347 bbls 40-gr oil, via 28/64-in, 2500 gals acid open hole, pay 6895-6992, comp 1-31-47.

Ward County—Failure: Stanolind's Sealy-Smith 1-B, c ne ne G&MMB&A 81, blk A, elev 2626, Yates 2340, Glorietta 4820, abnd 1-28-47 at 6510.

WEST TEXAS NEW PAY TEST

Andrews County — Fuhrman-Mascho Deep Failure: Globe O&R Co.'s Lockhart-Brown 1, 710 snl 660 wel PSL 20, blk A-41, ⅝ mi sw of San Andres prod, elev 3259, San Andres 4540, Glorietta 5640, Tubb 6610, Fullerton 6850, base Permian and top Mississippian 8685, abnd 1-31-47 at 8706.

WEST CENTRAL TEXAS WILDCATS

Brown County—Gas Discovery: Robt. J. Milligan et al's W. C. Tolleson 1, 150 fr sel 1455 fr swl of R. Highsmith sur 15, Marble Falls 1454, 5,500,000 gas, 3000 gals acid 1460-78, comp 1-27-47.

Callahan County—Failure: C. C. Woodson et al's Ross 1, 2640 snl 3810 wel sect 108, BBB&C sur, abnd 1-25-47 at 1655.

Shackelford County—Failure: Woodley Pet. Co.'s Davis 1, 1648 wel 330 nsl ne T&P Ry. 39, blk 12, elev 1765, base Saddle Creek 1293, base Bluff 1307, Flippen 1354, Bend 4278, Ellenburger 4895, abnd 1-28-47 at 4981.

Taylor County—Failure: J. W. Sorrells et al's Dance 1, 330 out nec sbdn 17, or 5510 snl 1698 ewl Jose Gabo sur 128, elev 1779, Dotham 2008, base Noodle Creek 2156, Saddle Creek 2355, Flippen 2395, abnd 1-29-47 at 3400.

WEST CENTRAL TEXAS OUTPOST

Runnels County—Failure: F. A. Gillespie & Sons' King 1, 4200 wel 1800 nsl D. Diaz sur 532, 1 mi n of prod elev 1780, Bend 4047, abnd 1-27-47 at 4081.

NORTH TEXAS WILDCATS

Archer County — Oil Discovery: Cochran & Wofford Cain's Virgil Seay 1-D, 1670 snl 750 wel blk 56, J. W. Harris sbdn, elev 1033, pump 35 bbls oil, 25 bbls wtr, sand 1484-89, comp 1-28-47.

Knox County—Failure: Doyle Pet. Corp.'s Kuhler 1, 2310 wel 1000 snl D&W Ry. 3, abnd 1-25-47 at 1725.

Wilbarger County — Failure: Texas Co.'s Hauser 1, 1200 nsl 2214 ewl Wm. Alston sur, elev 1273, base Coleman Junction 1709, lime 7090, abnd in Ellenburger 1-28-47 at 7800.

Wise County—Failure: R. T. Nail et al's Coffman 3, 990 out nwc A. C. Coffman sur, abnd 1-28-47 at 1026.

Young County—Failure: Scott Bros. et al's Wilson 1, 150 nsl 1500 ewl sect 77, TE&L Co. sur, elev 1246, abnd 1-20-47 at 1204.

NORTH TEXAS NEW PAY TEST

Young County—Deep Oil Discovery: Nu-Enamel Oil Operating Co.'s Sally Donnell 1, 467 s 150 w of nwc TE&L Co. 1205, but in J. C. Shelton sur, w offset to 1780-ft pumper, elev 1114, flow 47 bbls, natural, via 15/64-in, fr sand 2332-42, comp 1-13-47.

EAST TEXAS WILDCATS

Hunt County—Failures: Lynes & Douglas' Rankin 1, 330 e of m/w/wl 200 s of m/s/sl E. Mitchell sur, elev 555, abnd 1-23-47 at 3324.

John Wrather et al's Thompson-Illinois Bankers Life Ins. 1, 2150 nsl 330 ewl P. P. Woodbury sur, elev 508, abnd 1-21-47 at 2902.

Wood County—Failure: Dave Bennett-J. W. Sorrells' Maclin 1, (OWDD) 3150 snl 330 ewl Wm. Wallace sur, otd 5511, elev 367, base Pecan 4307, Austin chalk 6490-6710, 1st sand 6926, abnd 1-30-47 at 7820.

SOUTH CENTRAL TEXAS WILDCATS

Edwards County—Holman Oil Discovery: J. O. Robers Oil Co.'s J. S. Holman et al 1, 992 fr nl 1649 fr wl CCSD&RGNG sur 24, 160-ac lse, pay 548, open hole comp 548-80, pump 2 bbls 14-gr oil, comp 1-1-47 at 1010, pb 580.

Williamson County — Failure: M. M. McDowell's R. A. Mueller 1, 920 fr sel 330 fr swl 188-ac lse, abnd 1-20-47 at 1728.

SOUTHWEST TEXAS WILDCATS

Starr County — Failure: Dan Auld-W. W. Carter's Lazaro Pena et al 1, 330 fr ne&sel blk 27, E. K. Bateman sbdn of Pedernal Gr, 40-ac lse, abnd 1-22-47 at 2319.

Zapata County—Failure: Government Wells Oil Corp.'s Cuellar Bros. 1, 330 fr nw&nel nw½ s¼ TCRR sur 245, 160-ac lse, abnd 1-21-47 at 1342.

LOWER TEXAS COAST WILDCATS

Bee County — Failure: Wm. M. Nicholls' Homer Harris 1, 330 fr ne&sel P. Wilcox sur, 1¼ mi se Cadiz fld, 320-ac lse, abnd 1-18-47 at 4582.

Live Oak County — Failure: Stanolind's Alamo Lbr. Co. 1, 660 fr el 500 fr sl lot 104, blk 14, N. Navarro sur 326, 3½ mi se Suniland, abnd 1-23-47 at 9384.

San Patricio County—Failure: Jones & Morgan's W. E. Reese 1, 330 fr n&el 101.76-ac lse, being blk 7, J. J. Welder sbdn, John Pollan sur, 1 mi nw W. Sinton fld, abnd 1-21-47 at 7007.

Nueces County—Failure: Southern Minerals Corp.'s Hugo Isensee 1, 1612 fr el 1186 fr nl 356 fr swl 80-ac lse, BS&F sur 407, Saxet fld area, abnd 1-24-47 at 7514.

LOWER TEXAS COAST OUTPOST

Jim Wells County—Tijerina-Canales Failure: Sun's E. G. Canales 1, (OWDD) 1000 fr wl 750 fr nl A. Canales sur 342, 1980 s of nl 3924-ac lse, 3000 s of prod, 4500 e of Blutcher fld, otd 8002, abnd 1-24-47 at 11,264.

LOWER TEXAS COAST NEW PAY TEST

Nueces County—Agua Dulce Oil Discovery: L. M. Lockhart's F. & G. Prochaska 2, 467 fr el 1980 fr sl 460-ac lse, V. L. de Herrera Gr, 1320 n of Prochaska 1, ne exten well, pay 6585, perf 24 shots 6596-98, flow 141 bbls 42.7-gr, 11/64-in, gor 6280/1, comp 1-16-47 at 6650.

UPPER TEXAS COAST WILDCAT

Jefferson County: Fidelity Oil & Royalty Co.'s Hebert Tr. et al 1, 1980 fr s&wl sect 254 T&NO RR sur, 4473-ac lse, 3 mi se Seabreeze prod, abnd 1-20-47 at 10,238.

WYOMING WILDCAT

Natrona County—Failure: Roy Powers' Gov't. 1, nw nw ne 19-38n-80w, Castle Creek, 1st Wall Creek 2050, 3rd Wall Creek 2533, abnd 1-26-47 at 2550.

WYOMING NEW PAY TEST

Albany County—Quealy Deep Oil Discovery: California's Hoist 2, (OWDD) c ne se 13-17n-77w, otd 4270, U. Sundance 4235, L. Sundance 4315, Jelm 4370, Tensleep 5480, perf 190 shots 5480-5510, pump 278 bbls 23-gr, comp 1-14-47 at 5654.

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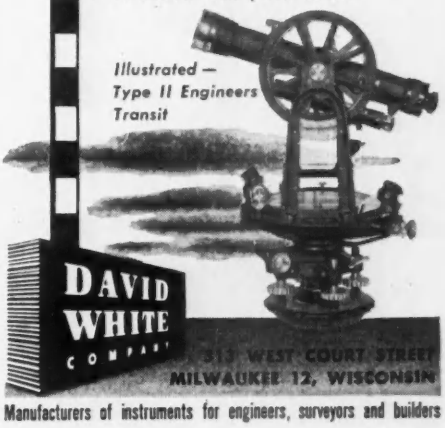
The recognition accorded White instruments is world-wide — a tribute to the accuracy and dependability for which they have long been famous. Write today for detailed literature and price data.



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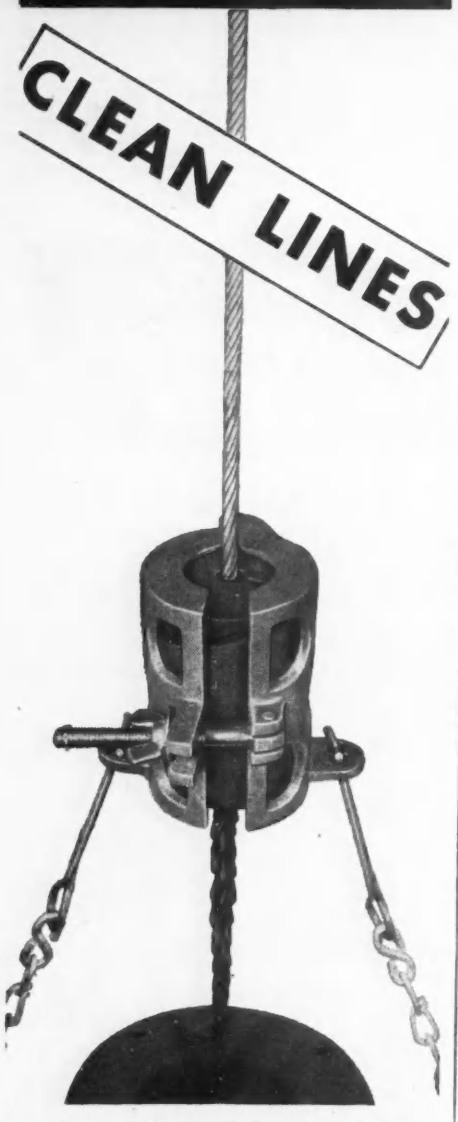

A clean wire line helps your crew. They can work safer and better on a clean floor, free from drippings. With a Patterson-Ballagh Wire Line Wiper the line is stripped completely of mud and oil. A compact steel housing contains a spiral rubber which is inexpensive and easily replaced. The rubber wipes the line as it comes out of the hole. Spark-proof. Use one on every well.

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SQUEAKS from the BULL WHEEL

Hints for Householders

Pick 'em fat, fellows. It's easier to live with 200 pounds of curves than 100 pounds of nerves.

Just Between Friends

"Dance?"

"No, thanks. I don't like it."

"Why?"

"Oh, it's nothing but hugging set to music."

"And what's wrong with that?"

"The music."

Oh, Baby!

The stork having crash-landed without warning, the young husband sent for the doctor. The doctor arrived and sent the husband out of the room.

After a while the doctor opened the door and asked for a screwdriver, which the astonished husband gave him. Then he emerged once again and asked for a hammer. When, on the third occasion, he wanted a hack saw, the amazed husband cried:

"I say—are you sure she's all right?"

"Not yet, but she will be when I get this bag open."

Helping Hand

"I'll teach you to make love to my daughter!"

"Wish you would, sir. I'm not doing a bit of good by myself."

Memory Lane

"I think I'll go downstairs and tell daughter's boy friend to beat it."

"Now, father, remember how we used to court."

"Eh? Say, now I know darned well I'm going down there!"

Turnabout

"Say ahh."

"But, Doctor, I didn't come in to be examined. I want to pay my bill."

"Ahhhhhhh!"

The Woman's Way

"I saw your wife in town today with a black patch over her eye. What's the matter with her?"

"Nothing. That's her new hat."

The Modern Way

"Mother, do all fairy tales begin with 'Once upon a time?'"

"No, darling. Sometimes they begin with 'My love, I will be detained at the office tonight.'"

Hard to Swallow

The attorney was examining a witness in court.

"Have you ever been arrested before?"

"No, sir!"

"Have you ever been in this court before?"

"No, sir!"

"Are you sure of that?"

"Yes, sir!"

"Your face looks very familiar—very familiar. Where have I seen you before?"

"Well, sir, I am the bartender in the saloon across the street from here."

The Twain Shall Meet

The third time she strutted across the hotel lobby, he stepped up with, "Pardon, are you looking for a particular person?"

She looked him up and down. "Well . . . I'm satisfied if you are."

How to Annoy Your Wife

"What tense is 'I am beautiful?'"

"Past."

Life Isn't Like This

"I am a man of few words. Will you or won't you?"

"You great big silver-tongued creature! You've talked me into it!"

Gone Are the Days

"What do you have for gray hair?"

"Nothing but the greatest respect."

Acquired Ambition

"How long have you been working here?"

"Ever since the boss threatened to fire me."

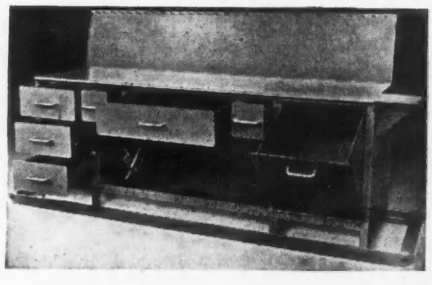
Poor Father

"Children, be diligent and steadfast and you will succeed. Do you remember my telling you of the great difficulty George Washington had to contend with?"

"Sure, teacher. He couldn't tell a lie."

OWEN

TYPE "A" WORK BENCHES



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These all-steel, all-welded benches provide a convenient place for all hand tools on the rig. They save drilling dollars by reducing loss and damage of tools and by saving time ordinarily spent in looking for misplaced tools.

Six big drawers and a rag bin provide storage space for all the tools on your rig. Drawers are weatherproof and mounted on rollers for easy operation.

Owen Work Benches are sold through all supply stores and distributed in California by Howard Supply Co. Order one for each rig you operate . . . they're available for immediate delivery.

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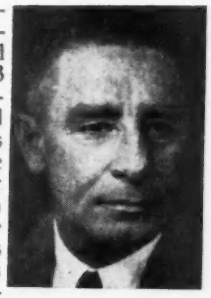
HOUSTON, TEXAS

A. B. Patterson, assistant South Texas Division manager of The Texas Company's producing department, retired January 31 after 33 years of service. Patterson entered the oil industry in 1905 as a roustabout in the Sour Lake field for Keever and Gordon Oil Company. He jointed The Texas Company in 1914 as assistant general superintendent of the South Texas Division with headquarters in Houston and later served as assistant general superintendent of the North Texas Division at Wichita Falls; assistant to the vice president in charge of production; general superintendent of the South Texas Division; and general superintendent of the Texas Production Company. He then was named division superintendent of the Louisiana-Arkansas Division and in 1933 was transferred to Houston as assistant division manager of the South Texas Division.



A. B. Patterson

»

John Randolph Beverley has been made head of the public relations department of the International Petroleum Company with headquarters at Lima, Peru.

»

Colonel G. C. P. Gifford of Houston has resigned as chief of staff of the 58th Fighter Wing, Texas Air National Guard, and has left for Kuwait to take a position with Gulf Exploration Company.

»

Haines Finnell has been appointed manager of public relations for Union Oil Company, succeeding **Sherman McFedries,** who has resigned to become associated with Foote, Cone and Belding, advertising agency.

»

J. E. Norton, since 1939 assistant comptroller with Standard Oil Company of California, has been appointed coordinator of personnel development. In this position, established under **C. E. Finney, Jr.,** in charge of industrial relations, Norton will assist in the selection, placement, training, appraisal and recognition of key personnel in the company. With Standard for 40 years, Norton started as a clerk at the Richmond Refinery. He was appointed manager of accounting in the manufacturing department at the company's San Francisco home office in 1921, which position he held until 1939.

J. E. Norton

William J. Armstrong, former oil and gas conservation officer and member of the Oklahoma Corporation Commission, has opened law offices in the Hale building, Oklahoma City.

»

Walter Marlin, recently retired as secretary of the Oklahoma State Land Office, has been named superintendent of the land department of Kerr-McGee Oil Industries, Oklahoma City.

Karl L. Kellogg of K. L. Kellogg and Sons, drilling contractors, has been re-elected chairman of the California Chapter of the American Association of Oilwell Drilling Contractors.

»

William H. Adams has been named manager of Shell Oil Company's traffic department on the West Coast, succeeding **Claude E. Donaldson,** retired. **Donald G. Ward,** formerly chief clerk, succeeds Adams as assistant manger of the department.

You can sell anything

— Once . . .

But that's not the way to do business. We like to satisfy our customers. We want them to come back year after year. And lots of them have—for 27 years.

Some come back because they like the honest, straight-forward way our dealers do business; others like the service they get; some like to be able to get spare parts in a hurry—and all of them like the general all-'round efficiency of a Jensen Unit.

Here's the kind of rut it pays to get into. Start now—by contacting your Jensen dealer or write us.

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EXPORT OFFICE: 50 CHURCH STREET, NEW YORK CITY

Jerry Connor, production foreman for The Texas Company at Bristow, Okla., will retire from active duty March 1. He has been employed by the firm since 1909, and has spent 17 years in the Bristow area.

»

H. G. Swanson, manager of the Chicago Marketing Division, Shell Oil Company, Inc., has been elected chairman of the API Illinois Petroleum Industries committee. Swanson joined Shell in 1923 and was appointed manager of the Chicago division in 1941.

C. F. Bevan, for many years superintendent of Standard Oil Company of California's natural gasoline department in the Kettleman-Coalinga area in California, recently joined the Arabian-American Oil Company as manger of stores in Saudi Arabia.

»

Willis H. Fenwick, Carey B. Smidtt and **Richard C. Klett** have organized The Intermountain Exploration and Engineering Company with headquarters in Casper, Wyo. The company's services will include elevation surveys of Rocky Mountain wells.

Dr. Richard N. Meinert, for ten years engaged in research work for Standard Oil Development Company, Bayway, N. J., has been named assistant chief of research for The Carter Oil Company at its Tulsa laboratories. Dr. Meinert did undergraduate work at Franklin and Marshall College, Lancaster, Penn., and in 1930 received his Ph.D degree in organic chemistry from Northwestern University, Evanston, Ill. He was on the faculty at Brown University, Providence, R. I., until 1936, when he went with the Esso organization at Bayway as research chemist.

Dr. R. N. Meinert

»

Dr. Charles N. Gould, Norman, Okla., geologist, spoke before the Shawnee, Okla., Geological Society January 23 on "The History of the Anadarko Basin and the Early Work Done on the Texas Panhandle."

»

Gordon H. Fisher, chief production engineer of the Fort Worth division of Gulf Oil Corporation, was elected chairman of the North Texas section, American Institute of Mining and Metallurgical Engineers. He succeeds **John H. Murrell,** Dallas. The new vice chairmen, representing the cities in which alternate meetings are held, are: **E. R. Brownscombe,** The Atlantic Refining Company, Dallas; **E. B. Nicholson,** Continental Oil Company, Wichita Falls; and **L. F. Peterson,** Standard Oil & Gas Company, Fort Worth. **Don Harlan,** The Texas Company, Fort Worth, was chosen secretary-treasurer. New directors are: **M. G. Cheney,** Coleman; **David Donoghue,** Fort Worth; **G. P. Crutchfield,** Albany; **Roland Gouldy,** Wichita Falls; and **R. S. Rhea,** Dallas.

»

James F. Brannan, former North Texas landman for The Pure Oil Company and inactive for some months after being struck by an automobile, has been transferred to Abilene as landman for the West Central Texas district.

»

John B. Duckworth has been named an assistant director of research for Standard Oil Company of Indiana. He has been a member of the research department since 1936, with the exception of a four-year term in military service with the power plant section of the Air Technical Service Command at Wright Field, Dayton, Ohio.

At the company's research laboratories at the Whiting, Ind., refinery, **F. S. Wood** has been promoted to group leader in charge of the lubricants group of the engine laboratory. **E. L. Gregory** has become mechanical supervisor with the rank of group leader in the engine laboratory, and **Dr. J. C. Bailie** has been advanced to assistant chief chemist.

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EAGLE LEAD WOOL
shuts off bottom water!
When bottom water threatens to sabotage your wells, you can stop it pronto with Eagle Lead Wool. This finely stranded, metallic wool makes a solid, lasting, watertight seal when tamped into cracks and crevices around the bottom of the hole. Economical Eagle Lead Wool saves you time, oil, money. It's easy to install—comes packed in convenient, 50-pound sacks—is easy to place in special cartridge-shaped Eagle Wire Containers sized to fit all casings. Order through your jobber today!
EAGLE EP PICHER
EAGLE LEAD WOOL
Seals off bottom water —keeps 'em flowing!
These 3 Eagle Bearing Metals meet most requirements . . .
Eagle Dreadnaught—for extreme speed and pressure conditions.
Eagle Outlasta—for medium speed and pressure conditions.
Eagle Durable—for low speed and pressure conditions.
THE EAGLE-PICHER COMPANY
Chicago • Joplin • Cincinnati • Dallas • Kansas City

Frederick L. Convers has been named vice president in charge of the New York office and foreign operations for The Continental Supply Company, Dallas. Convers served Continental in the same capacity before his retirement in June, 1945, when he was succeeded by **R. M. Dinges.** It was upon the death of the latter that Convers resumed his old position. Convers joined Continental in 1920 and was placed in charge of exports in 1929.

Frederick L. Convers

»

A. C. Fetzer, vice president, has been elected to the board of directors of Mack Manufacturing Corporation, and was also appointed general sales manager. He has been acting general sales manager.

»

W. L. (Billy) Vincent, former field service engineer for Magnet Cove Barium Corporation in southwest Louisiana, has been promoted to chief service engineer. He will have supervision over Magcobar mud engineers and field service men and will be stationed at the general sales offices in Houston. **John Hebert** has been appointed to succeed Vincent in Louisiana and will make his headquarters in Lake Charles.

»

Bennett S. Chapple, Jr., has been named as assistant vice president of sales, United States Steel Corporation of Delaware.

Deaths

Richard Hugh Hawn, 51, an official of the Pratt-Hewitt Oil Corporation and extensive owner of ranch, hotel and lumber interests with headquarters at Corpus Christi, Texas, died January 29 of a heart attack at Phoenix. He was actively associated with a group of Phoenix and Kansas City interests that propose to erect a refinery at Phoenix with a crude trunk line to West Texas fields.

»

Merrell Morgan Stuckey, 60, general manager of Iraq Petroleum Company, died January 29 at Haifa, Palestine. Stuckey had been in Iraq since 1930. His work in supplying the Allied fleets with oil in the Mediterranean area won him the French Legion of Honor and decorations from The Lebanon, Iraq and Trans-Jordan. He was formerly manager of the Andean Corporation in Colombia.

»

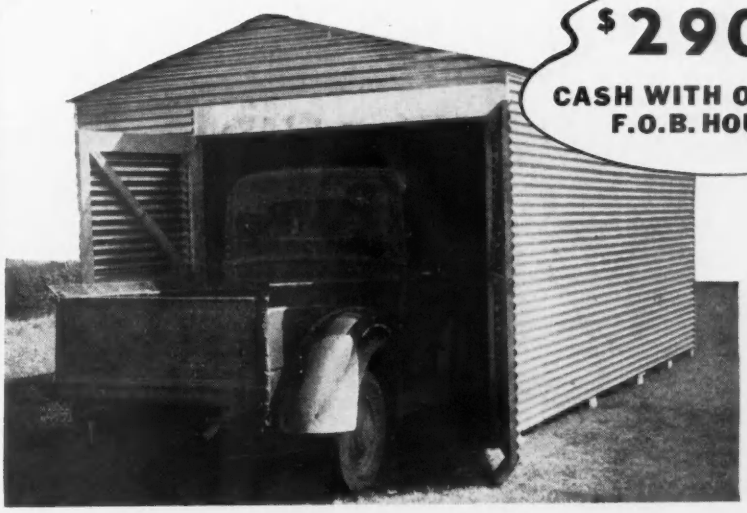
Albert Brain, 57, partner in the drilling contracting firm of O'Kane and Brain, Wilmington, Calif., died in Long Beach, January 25. He first worked in the oil industry at Taft, Calif. Following service in World War I he was employed by General Petroleum Corporation as a derrickman, then as a driller. He formed the partnership with **W. W. O'Kane** in 1922. The concern was one of the first to engage in contract drilling in California.

»

Verner D. Tilden, 70, pioneer Oklahoma, oil man, died in Okmulgee February 3. A native of Renrock, Ohio, Tilden was associated with Oil Well Supply Company in Jennings, La., prior to moving to Tulsa in 1915. He was a partner with the late **Hal Gruber** in the Halden Oil Company, and later was associated with the Williamsport Wire Rope Company as treasurer and credit manager. He formerly was employed by Bethlehem Supply Company.

»

Frank W. Perry, 75, Tulsa, retired oil broker, died January 30 in Tulsa. He was a native of Pennsylvania and moved to Tulsa in 1909.



Here's Your Ideal Mud House, Bunk House, Field Office or Garage for the Oil Fields!

Lick the materials problem with these two aluminum prefabricated buildings. At the top, a 12' x 20' utility building that would make an ideal mud storage house, a bunk house, field office, or combination office and bunk house. Made of Alcoa roof sheathing and wood framework treated for decay and termites, these buildings need no painting, no maintenance. Can be mounted on skids. 12' x 20' building weighs 1600 lbs. Price: $290.00 cash with order, F.O.B. Houston, Texas.

At bottom, larger utility building 22' x 49' x 10', is ideal lease warehouse, large bunk house-field office. Only $725.00 cash with order, F.O.B. Houston, Texas.

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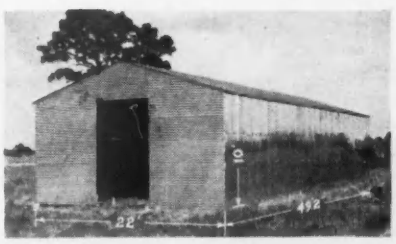

G. L. ROWLEY Construction Co.

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Cameron to Celebrate Opening Of New Offices February 15

Cameron Iron Works of California will be host to the industry on February 15 when the company celebrates the formal opening of new offices and warehouse at 1442 Hayes Avenue, Long Beach. Lunch and refreshments will be served beginning at 12 noon. Oil men throughout the West Coast are invited, according to Jeff Musolf, manager.

Preparations for the party include the installation of a display test rack to demonstrate the actual operation of a number of Cameron products under test pressures. Cut-away models will also be shown and the quick ram change feature of the new Cameron Type "QRC" Pressure-Operated Blowout Preventer will be demonstrated.

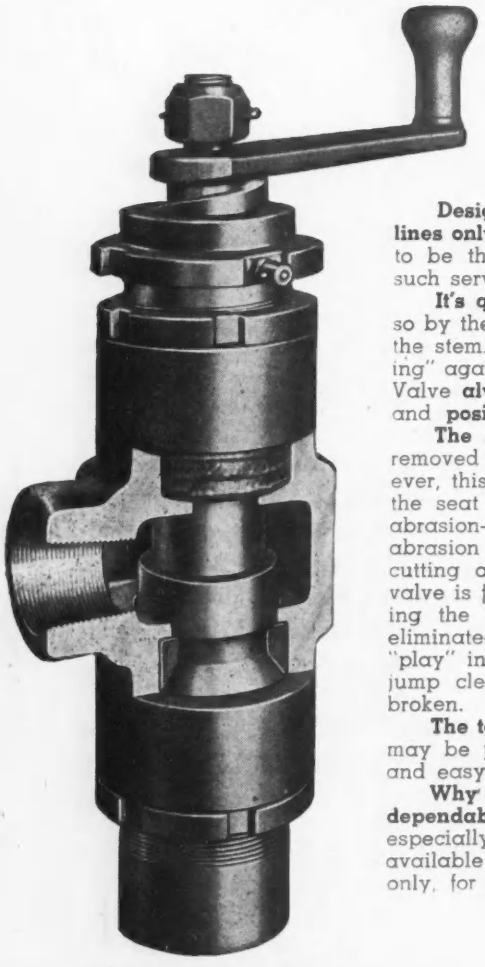
Hammond Agent Named

Harry E. Clark & Company, Houston, has been named southwest representative for Hammond Iron Works of Warren, Penn., designers, fabricators and erectors of steel storage tanks for liquid and dry storage, above-surface and underground, and steel and alloy plate work.

QUICK OPENING

QUICK CLOSING AND

ALWAYS DEPENDABLE



HERE'S WHY THE BIG FOUR RELEASE VALVE IS A FAVORITE EVERYWHERE

Designed especially for use on mud and water lines only, the Big Four Release Valve has proved to be the most dependable valve available for such services.

It's quick opening and quick closing . . . made so by the heavy, fast running screw that operates the stem. This same heavy screw prevents "kicking" against high pressures. The Big Four Release Valve **always** opens and closes **quickly, smoothly** and **positively.**

The seat is replaceable and may be easily removed and replaced whenever necessary. However, this **won't** be necessary very often because the seat is made of rubber, which is naturally abrasion-resistant and it's further protected against abrasion through unique stem design. Most of the cutting action on valve seats occurs when the valve is first opened and the plunger is just leaving the seat . . . this critical period has been eliminated in the Big Four Release Valve through "play" in the stem, which permits the plunger to jump clear of the seat when the seal is first broken.

The top gland is adjustable so that the handle may be placed in position convenient for quick and easy operation.

Why accept make-shifts or substitutes when **dependable** Big Four Release Valves, designed especially for mud and water line service, are available for immediate delivery. Made in 2" size only, for 5000 p.s.i. working pressure.

BIG FOUR MACHINE & SUPPLY CO.

CLAY CITY, ILLINOIS

Manufacturers of Big Four (Brauer) Products

Safety Is Matter of Teamwork Among Oil Well Supply Employes

Safety in industry is not an accident at the Wilson-Snyder plant of U. S. Steel's Oil Well Supply Company. It's a matter of professional team accomplishment.

The whistle at the end of work February 5 signalled the millionth consecutive man-hour of accident-free work in the plant—not a man off duty through a plant-incurred injury in 19 months.

The safety program began in 1945, with each employe assuming personal responsibility for plant-wide observance of safety discipline.

Workmen monitor each other in a friendly way—if a man forgets to wear safety glasses, for instance, he hears about it from a fellow worker.

International Celebrates 40th Year as Truck Manufacturer

The 40th anniversary of International Harvester Company's entry into truck manufacturing was commemorated January 17 in Fort Wayne, Ind., and a complete series of new International truck models was exhibited for the first time.

Fort Wayne is the site of one of International Harvester's three truck producing plants. Others are at Springfield, O., and Emeryville, Calif. The company's truck engine plant is at Indianapolis.

A feature of the day was an historical review of International Harvester's progress as a truck manufacturer, from the company's earliest experiments with combustion engines until now, when more than 600,000 International trucks are serving the nation.

Houston Division Office Opened By Superior Iron Works Firm

Superior Iron Works and Supply Company, Shreveport, has opened a division office with warehouse and yards at 6917 Navigation, Houston, and is offering a full line of oil field equipment.

C. J. Turnage is manager of the store and Ray L. Brock is in charge of city sales. The Houston division is a part of a considerable expansion program, according to Harold Turnage, Gulf Coast Division manager. Sam Backus, formerly with Mid-Continent Supply Company, is Superior's sales manger.

Cummins Employes Honored

Seven officials and employes who have completed at least 25 years of consecutive service with the Cummins Engine Company, Inc., were awarded gold recognition pins at the factory in Columbus, Ind.

A total of 445 pins and individual service certificates were presented to Cummins employes who had five or more years of consecutive service as of December 31, 1946. Members of the firm who received 25-year awards were C. L. Cummins, president; H. L. Knudsen, vice president in charge of engineering; Don J. Cummins, quality manager; Harry Voelz, Frank Fischvogt, Joe F. McCoy, and Ray Hammond.

Lee C. Moore to Employ 75 More Workers and Expand Facilities

An expansion program of Lee C. Moore & Company, Tulsa, will bring about an employment increase of 75 workers for handling work now being done by the Pittsburgh plant of the firm.

O. H. Dittmer, district sales manager of Tulsa, in announcing the expansion, said the program was facilitated by action of city and park board officials in approving sale of a 4.3-acre tract west of the company's plant.

More Tubular Goods Promised by National Tube Company Head

The National Tube Company will produce sufficient tubular goods in 1947 for 28,000 wells, President John E. Goble declared.

Goble announced that the company plans an $85 million expansion program this year, including a plant at Loraine, Ohio.

Waldrip-Campbell Firm Formed With Venezuela Headquarters

William S. Waldrip, owner of Waldrip Engineering Company, Los Angeles, and W. J. Campbell, president of Petroleum Machinery Corporation, New York, have formed the C. A. Industrias Waldrip Y. Campbell with head offices at Caracas, Venezuela. Plants have been established at Maracaibo and Barcelona with facilities for repairs and maintenance of oil field and refinery equipment.

Waldrip has announced acquisition of the electric light and power company in Barcelona, the output of which will be increased to keep pace with the demand of oil companies and industries in that area.

William S. Sprague, Los Angeles attorney, is the new president of Waldrip Engineering Company and heads the board of directors, which also includes Clifford E. Sommarstrom, James Moon, Archie D. Fuller and William E. Schrader.

In addition to manufacturing crown and travelling blocks, production machinery and other items in the drilling field, the company is producing portable drilling masts and self-propelled and trailer-mounted servicing rigs.

Goodrich Opens Office

A new district office of the Industrial Products Sales division of The B. F. Goodrich Company has been established in Cincinnati and John S. Gulledge appointed district manager, it was announced by E. F. Tomlinson, division general manager. Gulledge has been in industrial product sales since he joined the company in 1923.

IDECO Opens Store

Opening of an IDECO Supply Store at Hitschmann, Kansas, has been announced by C. A. McClelland of International Derrick and Equipment Company. The store will also carry a complete line of oil field equipment and supplies. Glenn Burris will manage the store and Charles E. Hamlin will be sales representative. R. R. (Lefty) Matthews, district manager for Kansas, will supervise the activities from his headquarters at Great Bend.

Finnell Firm Expands

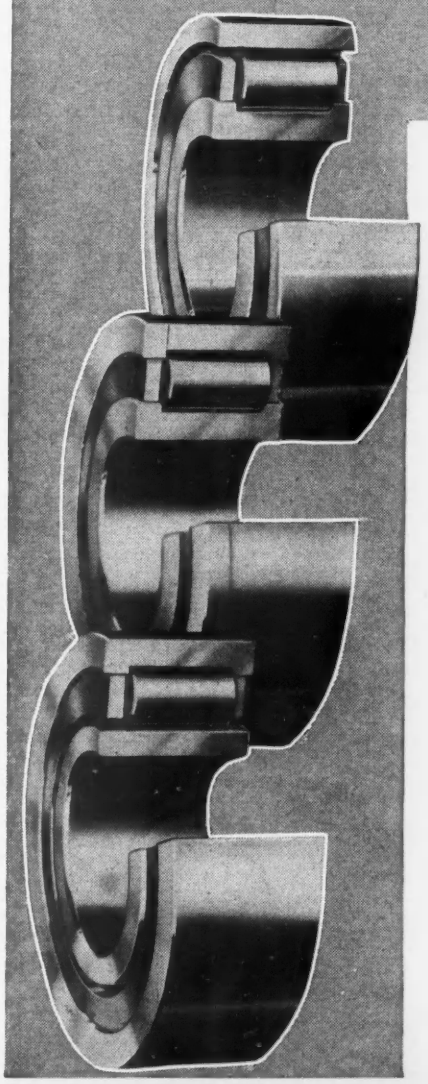
Leslie B. Finnell Construction Company, Holliday, Texas, has completed a new branch office and yard at S.E. 29th Street, Oklahoma City and C. L. Bonds has been named state manager.

Tank Firm Sold

Banks Moreland Company of Houston, manufacturers of tanks, was purchased by Graver Tank & Manufacturing Company, East Chicago, and will continue to operate in the southwest as Banks Moreland Company, a division of the purchasing company. The new division will be under the management of Banks Moreland, who has been made a vice president of Graver. The entire personnel has been retained.

Big Smoothies

AMERICAN RADIAL ROLLER BEARINGS



For nearly every application where the load is radial you'll find an AMERICAN RADIAL ROLLER BEARING to meet your requirements. Engineered to exacting standards, precision tested, specially designed for smooth, reliable operation under tremendous loads, AMERICAN RADIAL ROLLER BEARINGS function flawlessly in the heaviest equipment built and under the most rigorous operating conditions encountered in any industry.

AMERICAN RADIAL ROLLER BEARINGS come in 5 styles, 4 S.A.E. series and 85 sizes. Special designs to order are also available. Our engineers will cooperate with your own technical staff on all your roller bearing problems.

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AMERICAN Heavy-Duty ROLLER BEARINGS

Advertisers' Index

Allied Equipment Corp. 248
American Cyanamid Co. 134
*American Roller Bearing Co. 295
Avondale Marine Ways, Inc. 276
*Axelson Manufacturing Co. 22

*Baash-Ross Tool Co. 113
*Baker Oil Tools, Inc. 64 and 244
*Baldwin-Duckworth Division Chain Belt Co. 24
*Baroid Sales Division National Lead Co. 97
Wm. M. Barret, Inc. 296

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Malleable Iron • Heat Treated • 5 Sizes

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DELTA No. 1—1 swivel, 5/16 or 3/8" chain
DIXIE No. 1—2 swivels, 7/16 or 1/2" chain
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EDITORIAL INDEX, PAGE 65

* Indicates detailed information on products and services included in 1946-47 edition of Composite Catalog of Oil Field and Pipe-Line Equipment.

*Bethlehem Steel Co. 219
*Big Four Machine & Supply Co. 294
The Bovaird Supply Co. 157
*Bowen Co. of Texas, Inc. 14
*The Brewster Co. 120
Briggs & Stratton Corp. 259
Al Buchanan Drilling Co. 273
*Bucyrus-Erie Co. 58
*Butler Manufacturing Co. 235
*Byron Jackson Co. 155

*Cameron Iron Works, Inc. 137
*Cardwell Manufacturing Co. 16-17
*Caterpillar Tractor Co. 128
The Cavins Corp. 151
*Chain Belt Co. 24
*Chrysler Corp. 163
The City National Bank of Houston 18
Dan L. Clark Drilling Co. 280
*Clark Bros. Co. 172-173
*Climax Industries, Inc. 95
*Coffing Hoist Co. 284
*The Colorado Fuel & Iron Corp. 4
*Continental Motors Corp. 50
The Continental Supply Co. III Cover
*The Cooper-Bessemer Corp. 27
*Crane Co. 89
*Cummins Engine Co. 138

Dallas Aircraft Sales, Inc. 247
*Detroit Diesel Engine Division General Motors Corp. 34
*Diamond Chain Co., Inc. 243
*Dresser Industries, Inc. 169 and 172-173
*Durbin-Durco 296
Dynamatic Corp. 10

The Eagle-Picher Co. 292
*E. H. Edwards Co. 20
*Emsco Derrick & Equipment Co. Insert Opp. 232

*Fairbanks, Morse & Co. 209
The First National Bank & Trust Co. 277
First National Bank in Dallas 245
First National Bank in Houston 124
The Edwin H. Fitler 244
Ft. Worth Laboratories 296
*Franks Mfg. Corp. 187
Frost National Bank of San Antonio 282

*Gardner-Denver Co. 12
*The Garlock Packing Co. 62
Garrett Exploration Co. 227
*Gaso Pump & Burner Manufacturing Co. 117
*Gearench Mfg. Co. 270
General American Transportation Corp. 253
General Geophysical Co. 131
*General Motors Corp. 34
*General Welding Works, Inc. 281
F. I. Getty Estates 264
*H. P. Gott Manufacturing Co. 266
*Gray Tool Co. Insert Opp. 201
*Great Lakes Steel Corp. 15
Great Southern Life Insurance Co. 183
*The Guiberson Corp. 216
*Gulf Coast Machine & Supply Co. 23
Gulf Engineering Co. 246

*Halliburton Oil Well Cementing Co. IV Cover
Heiland Research Corp. 177
Heldie's Machine Works 31
*Helicoid Gage Division American Chain & Cable Co. 261
J. R. Horrigan Construction Co. 149
Houston Laboratories 296
Howard, Johnson & Vogt 296
Hudson Engineering Corp. Insert Opp. 233
*Hughes Tool Co. I Cover
Humble Oil & Refining Co. 111
*Hydril Co. 32

Independent Exploration Co. 175
Industrial Chemicals Division American Cyanamid Co. 134
*Industrial Engine Division Chrysler Corp. 163
Industrial Supply Co. 278
*Ingersoll-Rand Co. 123
*International Derrick & Equipment Co. 169
*International Harvester Co. 255

J. P. Machine & Tool Co. 260
*The Jeffrey Manufacturing Co. 159
W. P. Jenny 289
*Jensen Brothers Manufacturing Co. 291
*Johnston Oil Field Service Co. 215
*The S. M. Jones Co. 109
Jones & Laughlin Supply Co. 171
Earle M. Jorgensen Co. 273
*Joy Manufacturing Co. 36-37
*Justrite Manufacturing Co. 278

Keuffel & Esser Co. 248
*King Oil Tools 239
Kirby Petroleum Co. 273

*L. & H Machine Works 41
Landis Machine Co. 223
*Larkin Packer Co. 68
*The Thomas Laughlin Co. 286
*The Layne and Bowler Co. 40
*Le Roi Co. 263
*A. Leschen & Sons Rope Co. 127
*Link-Belt Co. 1
Lone Star Cement Corp. II Cover
*Lucey Boiler & Manufacturing Corp. 103
Lucey Products Corp. 11
*Lufkin Foundry & Machine Co. 56

*Magnet Cove Barium Corp. 39
*Manhattan Rubber Division Raybestos-Manhattan, Inc. 42
Marmon-Herrington Co. 211
*Martin-Decker Corp. 38
Mayes Bros., Inc. 51
*McCullough Tool Co. 35
*McEvoy Co. 28-29
*Merla Tool Corp. 59
Milam Drilling Co. 264
*Mission Manufacturing Co. Insert 180-181
*Lee C. Moore & Co. 212-213
Mudrite Chemicals 286
Murphy Diesel Co. 60
Murray Rubber Co. 49

National Bank of Commerce 229
*National Lead Co. 97
*Naylor Pipe Co. 283
*The New Deal Specialty Co. 203
*W. C. Norris Manufacturer, Inc. 250
*North American Geophysical Co. 47
*Norton Equipment Co. 286

The Ohio Oil Co. 264
*Oil Base, Inc. 6
*Oil Center Tool Co. 61
*The Oil Weekly 287
*Oil Well Supply Co. 140-141
*D. W. Onan & Sons, Inc. 279
*Owen Tool Co. 290

Pacific Wire Rope Co. Insert Opp. 200
*The Parkersburg Rig & Reel Co. 221
*Patterson-Ballagh Division Byron Jackson Co. 93 and 290
Pelican Well Tool & Supply Co. 280
*Penberthy Injector Co. 242
Petroleum Electric Power Association 179
Petroleum Service Co. 286
Port City Cabinet Works 268
The Producers Supply & Tool Co. 267

*J. P. Ratigan 225
*Raybestos-Manhattan, Inc. Manhattan Rubber Division 42
*Rector Well Equipment Co. 63
J. D. Reed Co. 43
*Reed Roller Bit Co. 8-9
Republic National Bank of Dallas 272
Republic Steel Corp. 52-53
*Republic Supply Co. 44-45
*The Ridge Tool Co. 245 and 247
*The Rig-A-Lite Co. 246
Rolo Manufacturing Co. 275
G. L. Rowley Construction Co. 246 and 293

*SKF Industries, Inc. 57
Sandlin Bros. 268
*Schlumberger Well Surveying Corp. 25
The Second National Bank of Houston 48
*Shaffer Tool Works 2-3
*Howard Smith Co. 161
O. R. Smith Manufacturing Co. 26
*Southern Mill & Manufacturing Co. 33
*Spang & Co. 142
*Sperry-Sun Well Surveying Co. 237
*Standco Brake Lining Co. 231 and 289
*Sterling Machinery Corp. 246
*Sterling Packing & Gasket Co. 167
Sun Oil Co. 248

*Technical Oil Tool Corp. 19
Texas Electric Service Co. 107
Texas Foundries 165
*Texas Iron Works 185
Texasteel Manufacturing Co. 13
*The Thermoid Co. 147
*Thompson Pump Co. 205
*Thompson Tool Co. 258
*Thornhill-Craver Co. 257
The Torrington Co. 46
Trading Post Section 288
*Tretolite Co. 55
Tube-Kote, Inc. 7
*Tuboscope 21

United States Steel Corp. 140-141
United Supply & Manufacturing Co. 119

Vanadium Corporation of America 54
Varner Co. 274

*W-K-M Company, Inc. 153
*Waukesha Motor Co. 30
*Weatherford Spring Co. 188-199
The Weld Inspection Laboratory 296
*The Wheland Co. 241
O. C. Whitaker Co. 285
David White Co. 289
Whitney National Bank of New Orleans 270
*Wickwire Spencer Steel Division The Colorado Fuel & Iron Corp. 4
Williams Bros. Corp. 145
K. R. Wilson 207
*Web Wilson Oil Tools 133
*Wilson Manufacturing Co. 5
*Wisconsin Motor Corp. 276

The Youngstown Sheet & Tube Co. 66